New York State Department of Environmental Conservation

Division of Fish, Wildlife and Marine Resources

Bureau of Fisheries

Annual Report of Highlights and Accomplishments
for
State Fiscal Year 2001/2002

November 1, 2002

Introduction

The New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Bureau of Fisheries delivers a very diverse program and annually conducts a wide array of activities to accomplish its mission:

> ***Conserve and enhance New York State's abundant and diverse populations of freshwater fishes while providing the public with quality recreational angling opportunities.***

This report for state fiscal year 2001/2002 (April 1, 2001 through March 31, 2002) is an effort to highlight many of the findings and accomplishments of activities and efforts carried out by Bureau of Fisheries staff. This report is not inclusive of all Bureau staff activities conducted during 2001/2002. It is a compilation of information that describes activities which were conducted that resulted in significant findings during 2001/2002 or activities from previous years for which results became available during 2001/2002. Information contained in this report was provided by the Regional Fisheries Units, Fish Hatcheries, Great Lakes Fisheries Units, and Central Office staff.

The information is arranged by fishery type (e.g. coldwater stream, warmwater lake) or focus area (e.g. creel and angler surveys, public access) and further by Unit within the Bureau (e.g. Region 1 Fisheries Unit, Adirondack Hatchery, Lake Erie Fisheries Unit) responsible for the accomplishment(s) or findings.

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Warmwater Lakes and Ponds

Region 1

Lake Ronkonkoma Aquatic Plant Survey
With the help of a student from Sachem High School, Region 1 Fisheries staff conducted a semi-quantitative survey of submerged aquatic vegetation in Lake Ronkonkoma. The last comprehensive vegetation survey was completed in 1938. Submerged plants were collected at 61 locations around the lake using a grappling hook attached to a nylon rope. Fifty out of the 61 sites contained some submerged vegetation. However, vegetation was nearly absent in water depths exceeding 10 feet. Five species of submerged plants were collected and several other species were observed during the survey. Western waterweed (*Elodea nuttallii*) was the dominant plant species. Other plants collected during the survey included macroscopic algae of the genus *Nitella* and three different species of pondweeds of the genus *Potamogeton.* Results support anecdotal observations by anglers that the weed beds are beginning to recover in the lake. Continued expansion of this vital habitat should result in better fishing.

Lake Ronkonkoma Walleye Evaluation
Lake Ronkonkoma has been stocked annually with walleye fingerlings since 1994 with the intent of reducing an overabundant white perch population through predation. The goal is to improve fishing and water quality in the lake. Since 1997, equal numbers of pond fingerlings and advanced fingerlings have been stocked in Lake Ronkonkoma as part of a statewide study to compare the performance of the two walleye fingerling types. To evaluate the stocking program, the following activities were completed by Region One staff in 2001: beach seining (August 6th), gillnetting (September 10th), electrofishing (October 29th), and monthly limnological sampling.

The beach seine survey is intended to index the reproduction of game and forage fish in the littoral zone. During the beach seining, largemouth bass were caught at a rate of 9.4 fish per haul and smallmouth bass were caught at a rate of 1 fish per haul. The catch rate for young-of-the-year largemouth bass was the highest on record since the inception of the beach seining program in 1990. Yellow perch were captured at a rate of 31 fish per haul while white perch were caught at a rate of 15 fish per haul. Other species found in the survey include: black crappie, bluegill, pumpkinseed, yellow perch, golden shiner, and banded killifish.

A total of thirty-one walleye were caught during the gillnet survey for an average catch rate of just over five per net. This catch demonstrates that stocked fingerlings have produced a substantial population of mature fish in the lake. The average walleye measured 16 inches and the largest specimen measured 22 inches and weighed 4.4 pounds. Only 20% of the catch originated as advanced fingerlings, indicating substantially better survival of pond fingerlings. White perch dominated the diet of walleye. However this species remains abundant in the lake at this time. The catch rate was 80 perch per net with the fish falling predominantly in the 6 to 8 inch range.

The total catch rate for walleye was 11.9 fish per hour during the electrofishing survey. Seventeen spring-stocked pond fingerlings and 25 fall-stocked advanced fingerlings were caught. However, the growth of the pond fingerlings was clearly superior. On average, advanced fingerlings measured 142 mm while pond fingerlings measured 213 mm. Differences in growth and survival likely hinge on the foraging success of the two types of fingerlings. More than three quarters of the pond fingerling stomachs contained prey items, mainly white perch, while the stomachs of advanced fingerlings rarely contained prey.

In summary, stocked walleye are thriving in Lake Ronkonkoma and actively consuming white perch. However, the catch rates of white perch remain high and the limnological data collected by Region One staff have yet to show an unambiguous shift in trophic structure. Walleye stocking remains the most promising management strategy to restore the balance of the lake, but more time and possibly higher stocking densities may be required to achieve the desired results.

Fort Pond Walleye Evaluation
Fort Pond has been stocked annually with walleye fingerlings since 1997 with the intent of reducing an overabundant white perch population through

predation. The goal is to improve fishing and water quality in the pond. Equal numbers of pond fingerlings and advanced fingerlings have been stocked in Fort Pond as part of a statewide study to compare the performance of two walleye fingerling types. To evaluate the stocking program, gillnetting was completed on September 26th and an electrofishing survey was done during the week of October 29th.

During the gillnet survey a total of 40 walleye were caught for an average catch of 6.7 per net night. This indicates that the stocking program has produced a dense population of mature fish. The average walleye measured 14.7 inches and the largest specimen measured 19.3 inches and weighed 2.25 pounds. All of the walleye caught were unmarked fish indicating that they originated from the pond fingerling stockings. As in Lake Ronkonkoma, walleye were generally plump and their stomach contents were dominated by white perch.

The overall electrofishing catch rate was 8.5 walleye per hour. Nineteen pond fingerlings and 15 advanced fingerlings were caught during the survey. The pond fingerlings averaged 244 mm while the advanced fingerlings averaged 134 mm. About three quarters of the pond fingerlings examined contained prey while the advanced fingerling were almost always empty.

Based on the average gill net catch of 75 perch per net, white perch are still very abundant in Fort Pond. However, the population is dominated by larger size classes than in Lake Ronkonkoma. The mode of the distribution falls at around 8.9 inches as opposed to 6.7 inches in Lake Ronkonkoma. The results of the 2001 surveys suggest a somewhat denser walleye population in Fort Pond than in Lake Ronkonkoma. Moreover, the walleye already seem to be affecting the white perch population.

Region 2

Baisley Pond, Queens

On May 7 the Region 1 and 2 fisheries units completed an electrofishing survey of Baisley Pond. Baisley Pond Park is a NYC Parks Department "catalyst" park. As such, it has been deemed a park of special concern and slated to be revitalized. Over the past 20 years the park had been slowly becoming more and more run-down. Under the new program the city plans on cleaning up the park and restoring all of it original functions, including fishing. To aid in this effort we agreed to survey the pond to get an idea of how to improve its fishery. The pond has a max depth of 9 feet, is spring fed and becomes choked with macrophytes during the summer. Shocking yielded largemouth bass, bluegills, pumpkinseeds, brown bullhead, golden shiners, carp, goldfish, black crappie, and white perch. Of the 450 fish sampled 55 were largemouth bass and 350 were either bluegill or pumpkinseed sunfish. There were very few quality sized fish besides a few largemouth bass that approached four pounds.

Region 3

Walton Lake

Rooted aquatic vegetation, water clarity, and populations of largemouth bass (Micropterus salmoides) and pumpkinseed (Lepomis gibbosus) and bluegill Lepomis macrochirus were monitored for 12 years following introduction of grass carp (Ctenopharyngodon idella) into Walton Lake in Orange County, New York. Areal coverage of submerged aquatic macrophytes, mostly Eurasian milfoil (Myriophyllum spicatum), was 33% of the 120-lake prior to introduction of 400 grass carp (10/vegetated acre) in 1987. The objective of the grass carp stocking program was to reduce submergent aquatic vegetation biomass by 75%. The first stocking resulted in limited control. An additional stocking in 1989 increased estimated grass carp density to 15 to 19/vegetated acre, resulting in a net reduction in macrophyte biomass of approximately 30%. Selective grazing on preferred species increased Eurasian milfoil coverage on established transects by 33% and resulted in a virtual monoculture. Additional stocking increased the estimated grass carp density to 21 to 27/vegetated acre and resulted in complete removal of the remaining milfoil.

Secchi disk readings remained generally in the 9.0 to 11.0 ft, suggesting macrophyte reduction did not result in increased algae blooms. The catch/unit effort (CPUE) during nine night time centrarchid sampling surveys of largemouth bass from 1986 to 2001 ranged from 38.0/h to 89.7/h and generally declined during the study. CPUE of combined Lepomis spp. ranged from 72.0/h to 409.5/h and declined throughout the study. CPUE of largemouth bass >= 12 in averaged 45.4/h (30.1/h to 65.6/h) and

declined throughout the study. CPUE of largemouth bass <= 12 in averaged 20.5/h (5.0 to 33.2/h), initially increased, then declined substantially as the submerged aquatic vegetation was eliminated**.** Largemouth bass PSD averaged 78.1 (range 56.7 to 97.1), declined through the mid 1990s, then increased. Bluegill PSD averaged 28.8 (range 4.0 to 43.4) and pumpkinseed averaged 48.7 (range 6.2 to 80.0). Lepomis spp. PSD declined through the 1990s.

A final report entitled "Experiences with Using Grass Carp for Aquatic Vegetation Control in DEC Region 3 with Emphasis on Walton Lake" was completed in November, 2001.

Swinging Bridge Reservoir
This reservoir was an experimental stocking target for walleye with the objective of establishing a self-sustaining population. 20,000 pond fingerlings were stocked annually from 1993 - 1997, with an additional 5,000,000 fry stocked in 1998. In October 2001, two nights of boat electrofishing were conducted, totaling 2.65 hr of "on" time. A total of 208 young-of-year (YOY) walleye were collected, along with nine older walleye. All young-of-year were wild fish.

Six fine mesh midwater gillnets (stretch mesh 3/4 " - 1.5") were set overnight, in November, collecting a total of 201 alewife. These results are in the range of past alewife-targeted netting efforts in this reservoir, indicating that the alewife population abundance was not in a depressed condition at this time.

An ichthyoplankton sample was collected in early May 2002 to try to determine walleye reproductive success this past spring. No larval walleye were collected in the reservoir proper, nor in the major tributary Mongaup River. The odd spring 2002 weather, plus a relative week later deployment of these sampling gears compared to 2001 may have negatively affected the 2002 sampling efficiency for larval walleye.

This documentation of successful walleye recruitment for two years in a row remains both exciting and perplexing, in that it appears the original objective of the experimental walleye stocking program has been met, in spite of an historically abundant alewife population which shouldn't allow for walleye fry survival. Future sampling will continue to document the status of this developing walleye population, while simultaneously attempting to document the dynamics of the alewife/walleye interactions that have allowed for two successful years of walleye recruitment.

Oscawana Lake
A draft report was completed reporting that from 1989 to1997 fingerling and yearling walleye *Stizostedion vitreum* were stocked at 370 acre Oscawana Lake by local residents at rates ranging from 3 to 12 per acre, and averaging 8 per acre. In 1998 the New York State Department of Environmental Conservation, Region 3, Bureau of Fisheries conducted an electrofishing and netting survey to determine the status of the lake's fish populations with special emphasis given to walleye.

Walleye collected during April electrofishing exceeded the statewide 15 inch minimum size limit by age 3 and averaged 16.8, 19.2 and 21.6 inches at ages 3, 4 and 5 respectively. This is considered fast growth. Based upon the ages determined from scale analysis, it appears that all walleye collected originated from 1993-97 plantings of 5 to 8 inch yearling walleye supplied by Phil Goeden, Fisheries, Alexandria, Minnesota. The lack of any walleye older than age 6 suggests that plantings of 2 inch fingerlings from the Empire hatchery in New York made in 1989 and 1990, and 3 to 6 inch fingerlings and or yearlings from the Zetts hatchery in Pennsylvania made in 1991 and 1992, had not survived. Analysis of largemouth bass data collected during May electrofishing indicates a largemouth bass PSD of 69 and a RSDp of 12. For *Lepomis spp.* (Bluegill *Lepomis macrochirus*, pumpkinseed *Lepomis gibbosus* and redbreast sunfish *Lepomis auritus*) the PSD was 49 and the PDSp 8. These structural indices suggest well balanced populations of the lake's principal predator and panfish populations.

Region 4

Kinderhook Lake Alum Treatment
A fishery survey of Kinderhook Lake (Columbia County) was conducted prior to an application of alum by the Kinderhook Lake Association. Kinderhook Lake is a 350 acre warmwater impoundment on the Valatie Kill with limited public access. The sampling plan followed the centrarchid manual with additional samples taken for TSMP

analysis. Sampling was conducted over a three night period. Visibility was compromised by an algal bloom. The catch rate for legal size black bass was 20 fish per hour of electrofishing. Many small perch (both white and yellow) were captured or noted. After the alum treatment is finished or stabilizes at a constant yearly rate, a follow-up survey will be planned to evaluate the effects of alum on fish populations.

Canadarago Lake
The biennial netting of 1,900 acre Canadarago Lake in Otsego County was completed in 2001, the 10th netting since 1983. Two, 150 foot long variable mesh (1.5 - 4.0 inches) nets are fished monthly from June through September at random locations throughout the lake for a total of eight net sets. The catch of 18.1 walleye and 83.8 yellow perch per net were the second and fourth highest catches, respectively. The netting data suggests that the walleye and yellow perch population remain at high levels.

Region 6

Oneida Lake Walleye Tagging
Region 6 Fisheries staff assisted Cornell University and Region 7 in an Oneida Lake walleye population study. Regional staff collected and finclipped 1,150 spawning walleye in the Barge Canal and Fish Creek during five days of sampling. Recoveries of marked walleye will help determine the portion of the Oneida Lake walleye population that spawn in the tributaries. This information has not been available in the past and should help in developing walleye management options for Oneida Lake.

Lows Lake Survey Summary
Largemouth bass were illegally introduced into Lows Lake (a remotely located Adirondack Lake located in SE St Lawrence County) in the late 1980's. Since then, bass have become well established. During the early 1990's a very popular sportfishery developed. High catch rates of trophy-sized largemouths have been reported. Recently, however, anglers have noticed some change, having observed a decline in both the in abundance and size quality of lake's bass population.

June 20 and 21, 2001, Region 6 Fisheries surveyed the Lows Lake fishery. The objective of this survey was to evaluate the status of resident fish populations. In particular, we were interested in quantifying the abundance, and size and age structures of the lake's largemouth bass population.

Over-all, 2.5 hours of boat electrofishing on-time netted 115 largemouth bass, 11 pumpkinseed, 2 brown bullhead and 1 tessellated darter. The catch of bass was as expected and suggests the population remains relatively abundant. On the other hand, the disparity between the catch of bass and other fish species (115:14) was unexpected. Past surveys (late 1980s via gillnets), before largemouth bass became established, revealed high densities of pumpkinseed, common shiner, creek chubs, brown bullheads and white suckers. Now, based on these (electrofishing) results, non-bass populations appear to be very depressed (or absent). It is unknown weather these declines are the result of the bass instruction, but the evidence is highly suggestive. Regardless, it appears that largemouth bass now substantially out-number their forage supply . If this continues, the quality of the Lows Lake largemouth bass sportfishery can be expected to decline even further.

The age distribution of bass sampled in 2001 suggests the population is recruiting well (almost 50% 1 & 2 year olds) in support of the "over-population" theory. The graph also shows poor survival at older (>4 years) ages, suggesting that angler exploitation or some other mortality factor is having an impact on the population. The length frequency distribution further supports these conclusions. High numbers of bass up to 6 inches represent the high abundance of 1 & 2 year olds, while the apparent decline in abundance of bass over 12 inches in length reflects a sportfishery impact.

Management recommendations:
1. Gillnet survey (a repeat of 1989 effort) to confirm the status of the lake's non-bass fish species (2002).
2. Repeat the electrofishing survey within the next two years to confirm 2001 results and establish trend
3. Consider special regulations to protect bass population from further declines.

Tooley Pond Survey Summary
Located on one of the newly acquired Champion easement parcels, in St. Lawrence County, Tooley Pond was sampled by night-electrofishing on June 16, 1999 and June 14, 2001. The purpose of the

1999 survey was to obtain baseline data prior to the pond being opened to the public for angling. The 2001 survey purpose was to check the status of the pond's largemouth bass population following two years of public angling under *No-Kill, Artificial Lures Only* Special Regulations.

In general, based on PSD (which ranged above 50 both survey years), Tooley Pond's bass population appears to be stable, and in balance with pumpkinseed, the most abundant non-game fish in pond. The 1999 and 2001 CPUEs for bass greater than or equal too 10 inches in length of 17.4 and 24.1, respectively, indicate the pond's moderate density population remains stable after two years of angling pressure. The 1999 RSD_{15} of 20, suggested a strong potential for quality angling existed prior to the pond being open for public angling. The doubling of the RSD_{15} in 2001 to 40, suggests the bass population size structure may have improved over the past two years, despite any mortality which may be associated with "no-kill" angling.

Recommendations:

- Maintain *No-Kill, Artificial Lures Only* Special Regulations
- Re-Survey in 2002 and 2004 to monitor population abundance and size structure, and re-evaluate the presence of strong/weak year classes and their impact on the fishery.
- Conduct angler survey to quantify effort

Sucker Lake Survey Summary

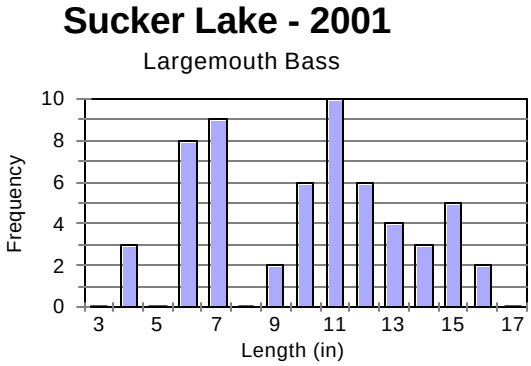
On the evening of June 14, 2001, Region 6 Fisheries surveyed Sucker Lake, located in Town of Fine, St Lawrence County. Three runs, totaling 0.9 hours of on-time (0.62 hours for non-game fish) yielded the following:

Species	Number	Catch Per Hour	Mean Length (in)
Largemouth bass	59	66	9.7
Smallmouth bass	1	1	5.5
Pumpkinseed	29	47	6.4
Rock Bass	2	3	5.5
White sucker	4	6	14.0
Golden shiner	1	2	5.1

High catch rates of largemouth bass and pumpkinseed indicate both species occur at higher than average densities in Sucker Lake. These two species combined appear to comprise the bulk of the lake's fish population. The catch of 31 largemouth bass >= 10 in (34 per hour) further indicates the presence of a high density bass population. PSD and RSD_{15} for largemouth bass, based on this sample, were 45 and 16, respectively. These, in combination with the sample's length frequency distribution (right) which characterizes the population's high proportion of >= 12 in individuals, suggests that Sucker Lake's largemouth bass population is stable and should be providing some quality angling opportunity.

The mean age of the largemouth bass sampled was 3.3 years. Based on mean lengths at age data (below) Sucker Lake bass appear to be growing faster than average for their first 3 years and slower than average thereafter (in comparison to other NYS waters).

Age	Mean Length (in)
1	5.2
2	7.0
3	10.1
4	11.6
5	12.1
6	14.3
7	14.7
8	
9	18.8



Recommendations:

- Maintain current management strategy based on Statewide Angling Regulations.
- Monitor lake's fishery by re-survey in 5 years (2006).

Region 7

Whitney Point Reservoir Sampling
Standard summer sampling was conducted in 2001 which consisted of twelve gillnet sites and four trapnet sites. The gillnet catch rate of walleye (10.5/net) was nearly double the all time catch rate (5.6) observed in 1999. The majority of walleye captured (127) were age 4+ (1997 year-class). Growth of this year-class continues to be slower than normal (average: 16.2 in., range: 13.5 in. - 19.0 in.). Age 4 + walleye in Whitney Point Reservoir generally average 18 inches in length. The strong 1999 year-class of walleye also showed up in the sample and their growth rate appeared to be normal (~14.5 in. average).

Older (mainly age 4+), large white crappie were more abundant than expected. This year-class of crappie was extremely abundant in the 1999 summer netting and continues to be the primary component of the current fishery. The 2000 year-class of white crappie, which appeared very abundant in the fall 2000 electrofishing survey, were not as well represented in the 2001 summer survey as anticipated. A total of 234 age 1+ white crappie were caught which is approximately one-third and one-quarter of the record numbers of age 1+ crappie sampled during the 1991 (609) and 1992 (988) summer surveys, respectively. Although their abundance is low relative to these “record” years we believe their level of abundance still reflects a moderately strong year-class which should support a modest fishery in the future.

Since 1994 night electrofishing in October has been conducted at four standard sites to assess abundance and growth of young-of-year (YOY) and yearling walleye in Whitney Point Reservoir. In 2001 all sites were sampled and a total of 382 YOY were collected. Population estimates of YOY walleye, using Serns (1982) methodology, follow:

1994 - 8,087	1999 - 55,275
1995 - 10,437	2000 - 842
1997 - 106,704	**2001 - 31,141**
1998 - 2,825	

Although not collected, young-of-year yellow perch appeared to be extremely abundant. Young-of-year white crappie abundance appeared to be moderate at best and will not likely provide a large contribution to the future crappie fishery. Interestingly, the fall electrofishing sample of age 4+ walleye had an average length of 17.3 in. (range: 15.8 in.-18.8 in., n=11). Although a small sample size, growth of these walleye after July appears to have been good.

Broome County PL566 Ponds
Two Broome County PL566 Flood Control ponds, *Nanticoke 7A* and *Nanticoke 13* were sampled in mid-July, 2001 to determine the current status of their fish communities. Survey data has not yet been analyzed but it appears that the 1985 stocking of northern pike has created a self sustaining population in Nanticoke 13. Stocked yearling rainbow trout were captured in Nanticoke 7A and quality sized bluegills (6-8 in.) were very abundant.

Oneida Lake Management
Efforts to return the adult walleye population to its long term average included increasing fry stocking to 150 million, stocking 200,000 pond fingerling walleye, stocking 100,000 yearling walleye (March 2002), and instituting restrictive harvest regulations (18" minimum length, 3/ day limit) effective October 1, 2001. In addition, planned attempts to reduce predation impacts of double-crested cormorant include limiting successful nests to 100 annually (done by Cornell) and hazing fall migrants (done by USDA - APHIS). Efforts to limit successful nests did not occur in 2001 and 225 nests were successful, fledging 284 chicks**.** However, hazing was conducted during September as planned, reducing numbers from approximately 1,700 to less than 100 the first week. The numbers of cormorants remained low for the remainder of the month**.** (Fisheries assessment and monitoring of Oneida lake’s fish community and fishery is done by Cornell University under contract to DEC.)

Chittenango Creek Walleye Population Estimate
In a cooperative effort with Cornell University, lower Chittenango Creek, a major tributary to Oneida Lake, was boat electrofished in April 2001 to estimate (through a mark and recapture technique) the size of the creek’s walleye spawning population and its contribution to the overall Oneida Lake walleye population. A total of 403 spawning adult walleye were collected in six days. Each walleye collected was marked with a one half left pectoral fin clip prior to release for future identification. Of the 403 walleye marked and

released, 15 were caught more than once during the sampling period (see table below).

Number of walleye collected, marked and released during an April 2001 boat electrofishing survey of lower Chittenango Creek. All first caught walleye were given a one half left pectoral fin clip prior to release.

Collection Date	Water Temp (EF)	Electro-fishing Time (hr)	Number of walleye captured, marked and released	Number of walleye caught more than once	Daily total
4/3/01	36.9	1.19	88	0	88
4/4/01	40.0	0.61	80	4	84
4/5/01	44.2	0.74	86	2	88
4/6/01	45.0	1.27	86	5	91
4/16/01	51.0	0.77	22	2	24
4/19/01	47.0	1.07	41	2	43
Total		**5.65**	**403**	**15**	**418**

Note: Chittenango Creek could not be electrofished between 4/6/01 and 4/16/01 because of flood conditions. Walleye spawning probably peaked during this period.

Marking and releasing walleye during the 2001 spawning run was the first half of the mark and recapture population estimate. Region 7 fisheries will electrofish lower Chittenango Creek during the 2002 walleye spawning run with the primary purpose of collecting (recapturing) walleye that were marked during the 2001 spawning run. The ratio of marked walleye collected in 2002 to the total number of walleye collected in 2002 will be considered roughly equal to the ratio of the 403 marked walleye to the total number of adult walleye in Chittenango Creek during the 2001 marking period.

Cross Lake Walleye Stocking Evaluation

Recent efforts to establish walleye as a major fishery in Cross Lake began in 1996 when 37,000 fingerlings from Chautaugua Hatchery were boat stocked off the northwest shore. A stocking of 6,520 fingerlings from South Otselic Hatchery followed later that year. Since then Cross Lake has been stocked with 69,800, 43,600 and 43,520 walleye fingerlings in 1998, 1999 and 2001, respectively.

Cross Lake walleye stocking has been evaluated by night electrofishing in spring-early summer 1997 and in fall 2000 and 2001. The 1997 evaluation consisted of sampling the entire shoreline with eight 15 minute all fish runs and eight 30 minute gamefish runs. A total of 1,211 fish (23 species) were collected, of which 14 were walleye (2.3 walleye/hr). The 14 walleye collected ranged from 6 to 9 inches in length and averaged 7.9 inches in length. Scale aging revealed all 14 walleye were yearlings probably originating from the 1996 fingerling stocking.

The 2000 evaluation consisted of sampling habitat types with two 15 minute all fish runs and six 30 minute gamefish runs. A total of 253 fish (13 species) were collected, of which six were walleye (1.7 walleye/hr). Scale aging revealed five yearling walleye probably originating from the 1999 fingerling stocking and one 21.9 inch walleye too old to have been stocked in Cross Lake since 1996.

The 2001 evaluation consisted of sampling habitat types with eight 30 minute runs. A total of 251 fish (18 species) were collected, of which six were walleye (1.5 walleye/hr). The six walleye collected ranged from 8.1 to 9.6 inches in length and averaged 8.9 inches in length. Scale aging revealed all six walleye were fingerlings probably originating from the 2001 stocking.

Results of the Cross Lake electrofishing surveys are somewhat encouraging in that walleye probably originating from the fingerling stockings were collected during each survey. However, low walleye catch rates in all three surveys suggest only modest survival. The apparent level of survival is probably an artifact of substantial out-migration to the Seneca River since anglers have also recently reported an increase in the number of walleye caught in the state ditch area of the Seneca River just downstream from Cross Lake.

Region 8

Almond Reservoir

A warmwater fisheries assessment of Almond Reservoir, a flood control project in western Steuben County, was conducted using night boat electrofishing and gill net sets during Summer, 2001. Electrofishing samples were geared toward gamefish and panfish species with the majority of the shoreline sampled. A total of 94 fish were collected with largemouth bass and yellow perch accounting for 64% and 23% respectively. Two gill nets were set with one net in deeper water and the other fishing the entire water column. A total of 168

fish representing 7 species were collected with golden shiners representing 56% of the catch. Based on our sampling, largemouth bass provide the only opportunity to anglers. Growth rate, condition, and size and age distribution indices indicated that the largemouth bass population was in good shape. The forage base consisted primarily of large golden shiners whose young probably provide the majority of forage for bass, crappie, and yellow perch. Black crappie and yellow perch were represented by one or two age classes and provide little angling opportunity. Although the reservoir was suited to sunfish species, only two (both pumpkinseeds) were collected. Predation from largemouth bass, habitat limitations, or other unknown factors are potentially limiting their population and need further investigation.

Conesus Lake Fish Stock Assessment
Standard gang gill netting was conducted on Conesus Lake from September 17-21, 2001. The purpose of the netting is to periodically (approximately 3 year intervals) assess fish stocks, particularly walleye. One hundred nine walleyes were caught in 12 nets. The catch rate of 9.08 walleye/net is similar to 9.8 in 1991, but is down from 33.1 in 1994 and 19.1 in 1997. Preliminary analysis of the data shows that, as suspected, nearly all of the walleye caught are greater than 450 mm. Scale analysis for age has not been completed, but it is believed that these fish are older than 4+ years. This indicates that no natural recruitment to the fishery has occurred since fingerling stocking of walleyes ceased in 1997. Fingerling walleye were stocked in July 2001. The success of these stocked fish will be evaluated by night time electrofishing in late May 2002. A Peterson population estimate is scheduled for Spring 2002.

Conesus Lake Walleye Spawning Success
In cooperation with the Community College of the Finger Lakes (CCFL) and the United States Geological Service (USGS), a CCFL student intern set drift nets in Conesus Inlet from May 2 to 11, 2001. The purpose was to further evaluate the fate of walleye fry spawned in the Inlet. The drift net samples were evaluated by staff at USGS Tunnison Lab in Cortland. Only one sample, upstream most sample collected on May 4 had walleye fry present.

Region 9

Chautauqua Lake Warmwater Surveys
Regional staff assisted Prendergast Hatchery with the tending of the trapnets to monitor the adult muskellunge population. Nets were fished for approximately 21 net nights and produced a catch per net index of 21. This was below the recommended management level of 28 muskellunge per net established by the Chautauqua Lake workgroup. Age-4 to age-6 finclipped muskellunge contributed to 16% of the total catch, showing poor recruitment of these cohorts. These cohorts were stocked at 7.2 (1995), 7.3 (1996) and 6.8 (1997) inches. Twelve percent of the adult muskellunge (>32 inches) had open redspot lesions and the ratio of males to females was 0.3:1.0.

Prey species and age-0 walleye were sampled by a 16 ft. bottom trawl in September and October. The trawl catch indicated an increased abundance of >age-0 pumpkinseed, bluegill and black crappie, while age-0 and adult yellow perch continued to be the most abundant prey species collected by trawl. Age-0 and adult white perch abundance declined from previous trawl surveys. Abundance of age-0 walleye was low, continuing the trend of poor recruitment that has occurred since 1996. Low recruitment has been associated in part to predation by the strong 1993 walleye year class although the possibility of negative associations with white perch cannot be discounted. Low recruitment of walleye is expected to show impacts to the recreational fishery in 2002.

Fisheries staff completed fall electrofishing surveys targeting muskellunge, walleye and black bass. Adult walleye abundance had declined from 2000 and was consistent with data derived from the gill net assessment. Age-0 walleye abundance was low and was similar to data collected by trawl.

Cuba Lake
Late spring electrofishing in 2001 produced catch rates of 76 smallmouth bass, 15 walleye, 7 northern pike and 5 largemouth bass/hour. Rock bass and yellow perch are the dominant panfish, followed by pumpkinseed sunfish. Walleye fry stocking was discontinued in 1999 because of slow walleye growth rates and to evaluate natural reproduction. In

2001, fall electrofishing netted 10 age 0+ walleye/hour and 10 age 1+ walleye/hour. Northern pike, a recent illegal introduction in the early 1990's, continues to expand its population, with 7 consecutive naturally spawned year classes documented.

Silver Lake

Electrofishing shortly after ice-out in 2001 produced a catch rate of 466 adult walleye/hour. State fingerling stocking was discontinued after 1991, state fry stocking was discontinued after 1996 and volunteer fingerling stocking was discontinued after 1994. Minimally, over 40% of the walleye collected in 2001 were naturally reproduced. Late spring electrofishing produced yellow perch catch rates of 760 fish/hour, pumpkinseed 80 fish/hour, bluegill 66 fish/hour and rock bass 85 fish/hour. The yellow perch PSD in 2001 was 42% while the PSD for pumpkinseed was 38% and bluegill 18%. Age 4 yellow perch averaged 200 mm in length, compared to 168 mm at age 4 in 1987 just after the walleye stocking program began. Fall electrofishing netted 35 largemouth bass/hour (8/hour > 15 inches), 10 walleye/hour and 5 northern pike/hour. Only 1 young of year walleye was collected. Fall electrofishing for age 0+ or 1+ walleye in Silver Lake has been unsuccessful over the years, however it is evident from electrofishing the spawning population that reproduction is taking place. Zebra mussels were collected for the first time in Silver Lake in November 2001. (Note: Catch rates for a productive lake like Silver Lake can be misleading. For example, the spring catch rates for walleye and yellow perch can be thought of as netting rates. During electrofishing for spawning walleye perhaps we can physically net half of the walleye we see, while during the spring electrofishing for panfish, it is difficult to even put an efficiency on the yellow perch, but to toss out a number perhaps 5%, meaning over 15,000 yellow perch go by the boat per hour of electrofishing).

Cassadaga Lakes Warmwater Surveys - Assessment of Slot Limit Regulation

To increase growth rates and length distributions of black bass and panfish, a 12-15 inch protected length limit (slot) was imposed for black bass in 1994. Electrofishing in spring, 2001 continued to show an increased abundance of black bass within and exceeding the protected slot with acceptable recruitment of bass below the slot. Analysis of creel survey data indicated that angler catch rates for preferred and quality length bass exceeded levels considered high from selected waters in New York State. The creel survey also indicated that few bass less that 12 in TL were harvested by anglers. Fisheries staff will continue to evaluate this special regulation to complete assessment over two full generations (10 years)..

Central Office - Inland Section

Assessment of Survival of Stocked Walleye Fingerlings

2001 marked the fifth and final year for the Federal Aid to Sportfish Restoration funded study “Factors Affecting Survival of Stocked Walleye in New York Lakes”. The 5 year study was designed to complement a previous study on walleye fingerling survival in New York waters. Since 1991, 16 New York waters have been included in this study. Results of this research indicate that although the relative success of the stocking of pond and fall fingerling walleyes has been quite variable, common factors appear to be impacting the survival of both sizes of walleye fingerlings. In most waters, pond-reared fingerling walleyes stocked at approximately 1.5 to 2 inches in size, outperformed the larger 5 inch fall fingerling walleye grown intensively on dry food at the Oneida Fish Hatchery. Pond fingerlings were observed to grow faster and shift to a piscivorous (fish-eating) diet more successfully than fall fingerlings. The major causative factor resulting in the success or failure of a walleye stocking was determined to be predation risk. Abundance of largemouth bass and pike over 15 inches was noted to be the largest factor impacting walleye survival. Walleyes were established in a number of the study waters including Fort Pond and Lake Ronkonkoma on Long Island, where walleyes have not been historically found.

Analysis of fish population trends in Oneida and Canadarago Lakes

Researchers at the Cornell Biological Field Station on Oneida Lake completed their annual assessment of the fish community in Oneida and Canadarago Lakes. The Federal Aid to Sportfish Restoration funded Oneida and Canadarago Lake fishery monitoring projects are the tow longest running warmwater fishery assessment projects in New York State and have provided an excellent insight into the complex dynamics associated with warmwater fish populations in large northern lakes.

Oneida Lake

The Oneida Lake walleye population is currently estimated to be 276,000 age 4 and older fish, which continues to be substantially lower than the long-term average. Large increases in the walleye population are not expected through 2004. The walleye population decline is attributed to increased mortality at two life stages 1) from 9-day-old larvae to their first fall, and 2) between age 1 and 4. Cormorants likely cause the latter. Declining phosphorus loading (since 1987), invasion of zebra mussels (since 1992) and disappearance of the alternative prey species (gizzard shad, since 1993) may all have contributed to the low walleye recruitment since 1992. Evidence of change in the lake is the higher water clarity and lower phytoplankton biomass observed since 1992.

The yellow perch population was estimated at 947,000 age 3 and older fish, which is an increase since the last population estimate was made, but below the long-term average. Zebra mussels have cleared the water but have not affected yellow perch growth rates presumably because zooplankton production has not declined. Increased light levels should also increase foraging efficiency of perch on benthic invertebrates. Abundance of larval walleye (9-day old) was high in 2001, but survival was relatively poor and abundance of YOY walleye in the fall, although higher than in the 1990s, was lower than in previous decades. Abundance of YOY yellow perch continues to be low. Cormorant predation on adult yellow perch is similar to angler catch rates, but cormorants also feed on sub-adults. For adult walleye, anglers are the more important predator. Current management actions include limiting cormorant nesting success and harassment during the fall migration. The walleye minimum size limit was also increased from 15" to 18". These two management actions in concert should result in a slow increase in both populations. Population data from 2001 is consistent with these expectations.

Canadarago Lake

Fall electrofishing indicate good recruitment (catch rates 8 fish/hr) of naturally spawned young-of-the-year (YOY) walleye in Canadarago Lake in 2001. Adult walleye numbers remained high in both electrofishing (28.5 fish/hr) and gill net samples (18.1 fish/net). YOY yellow perch numbers were high in 2001. One 102mm alewife was caught in the end of October. Changes in yellow perch and walleye growth rates over time show strong effects of the increasing walleye population, both through increased growth rates of yellow perch and decreased growth rate of walleye. Interestingly, the growth response in YOY yellow perch was lagged by several years, a dynamics attributed to changes in habitat choice by yellow perch as the risk for predation from walleye increased and before the population level effects of density dependent growth rates went into effect. Secchi disk transparency was lower than the average for the 1990s and the large zooplankton *Daphnia pulicaria* disappeared in July to August, suggesting higher planktivory rates from YOY fish than in previous decades. This correlate well with high catches of YOY yellow perch in 2001, but may also be an effect of a small but increasing population of alewife.

Coldwater Lakes and Ponds

Region 4

Basswood Pond
Basswood Pond is a 15 acre trout pond in Otsego County that is stocked annually with 2,100 rainbow trout fingerlings in the fall and 1,000 brook trout yearlings in the spring. In recent years, the pond has become infested with goldfish and other non-trout species which compete directly with the more desirable species. The results are reduced trout survival and growth rates. The pond was reclaimed September 11, 2001, using rotenone to kill all fish in the pond. An estimated 51 rainbow trout, 11 brook trout, 1 largemouth bass, 12 -15 white sucker, 1,000's of bluntnose minnow, and 100's of goldfish. The treatment is believed to be 100% successful. The pond will be restocked with rainbow trout and brook trout in the spring of 2002.

Region 5

Mohegan Lake Surveyed
Mohegan Lake, in the Town of Long Lake, Hamilton County, was surveyed to assess lake trout and landlocked salmon stocking policies. Mohegan Lake is partially within the Moose River Plains Wild Forest, but is also bordered by private lands once owned by J.P. Morgan. A famous Adirondack great camp, Camp Uncas, still exists on the pond. Gill-nets were set at several depth ranges to catch the full variety of species present. A total of 31 lake trout ranging from 9 to 26 inches were captured, along with yellow perch and white sucker. No landlocked salmon were captured, nor were rainbow smelt which have been caught historically in this lake. Pumpkinseed were observed in the shallows of the lake. Several large lake trout were kept for mercury analysis at the request of the Adirondack Lake Survey and EPA. Lake trout age and growth will be determined from scale samples later this year.

Rock and Little Rock Ponds Reclaimed
Rock and Little Rock Ponds in the Pharaoh Lake Wilderness were reclaimed in mid-November. This was a comparatively large project representing more than 60 acres of restored brook trout habitat. Rock and Little Rock Ponds are in the Town of Ticonderoga and were formerly high quality brook trout waters which had been overwhelmed by non-native yellow perch. The ponds will be restocked with a heritage strain of brook trout in 2002. The treatment was complicated by the reassignment of the state helicopter to fight a forest fire before the project was completed. The pilots were able to fly all materials necessary to finish the project to the pond before they departed. Fisheries staff finished the project by walking in on the final day.

Endangered Round Whitefish Eggs Collected
For the third consecutive year, round whitefish eggs were collected from Lower Cascade Lake, Essex County in an effort to expand the range of this endangered species. One trap net was set for the time period of Nov 19-23, capturing a total of 202 round whitefish. Eggs were take from 51 ripe females and milt from 49 males. Ovarian fluid samples were taken to help establish a disease history for this water. Approximately 25,000 eggs were fertilized and delivered to the Constantia Hatchery for rearing to spring fingerling size. Progeny from this effort will be stocked back into Lower Cascade Lake and to several other candidate waters in Regions 5 and 6 in an effort to safeguard this species listed as “Endangered” in New York State. On the final day of netting, 62 ripe adults were transferred to nearby Upper Cascade Lake. Other species captured during this effort were brook trout, brown trout and white sucker.

Region 7

Jeffrey Pond Post Reclamation Monitoring
Jeffrey Pond, Chenango County, was surveyed as part of the on-going effort to determine if significant growth and survival of brook trout has occurred since the reclamation in 1997. The reclamation was done in conjunction with the dam repair work which required a complete draw-down of the lake.

The pond was boat electrofished during the daylight hours of April 30, 2001 resulting in the capture of just one holdover brook trout. Other species captured were largemouth bass, pumpkinseed, bullhead, and golden shiner. This survey concluded the post-reclamation monitoring effort. The unit’s determination is that management of Jeffrey Pond as a brook trout only fishery is not practical at this

time. Either through avoidance of the rotenone treatment and/or illegal restocking a substantial non-trout fish community has reestablished in the pond. Additionally, survival and growth of stocked brook trout was not significant enough to warrant future efforts to control non-trout fishes. Furthermore, informal surveys of anglers using the pond, during our various sampling efforts, revealed a general lack of support for the trout only management effort.

On October 1, 2002 the special regulation prohibiting the use of fish as bait in Jeffrey Pond will be rescinded. Future management efforts at Jeffrey Pond may include the re-stocking of yellow perch and largemouth bass into the pond to try and recreate the thriving pre-reclamation warmwater fishery which had existed.

Tri-County Pond Survey

A biological survey was conducted on Tri-County Pond, Tioga County on June 28, 2001. This pond has been managed with a put-grow-and-take rainbow trout stocking of 200 fish for several decades. A gill-net and trap-net were each fished for one night and water chemistry data was collected. Recent requests by anglers to allow ice fishing and the lack of any recent fisheries data prompted the survey.

Oxygen and temperature levels between depths of 5 and 8 feet were suitable to support trout. Six yearling rainbow trout were captured in the gillnet and all were in good condition. Over 400 black crappie were captured in the trapnet, all between 5 and 6.5 inches in length. All crappie sampled were 4 years old indicating severe stunting has occurred. Several bullhead and golden shiners were also captured.

It is recommended that future management of the trout fishery be on a put-and-take basis due to the likelihood of future reintroduction of unwanted species by anglers. Ice fishing will also be permitted, beginning October, 2002. The introduction of adult largemouth bass is being contemplated in order to reduce the abundance of crappie. This should allow the remaining crappie to grow better but would also negatively impact survival of stocked trout.

Bowman Lake Fish Salvage

In response to the dam outlet failure in mid-June at Bowman Lake, Chenango County, staff attempted a salvage operation to rescue freshly stocked and holdover trout that remained in the emptying lake. Seine hauls were conducted for two days and resulted in the capture of only a dozen rainbow trout. The effort was hampered by a deep (6 feet) hole and large amounts of woody debris and large rocks. Boat electrofishing was not possible. Staff concluded that most of the fish had migrated out of the lake while it was draining. Dam outlet repairs were finally made in late summer but the lake remained nearly dry for most of the year. Bowman Lake is a 34 acre impoundment which is stocked with brook and brown trout and is managed as a put-grow-and-take trout fishery. Sunfish have recently been found in the lake and bullhead are also present.

Warmwater Rivers and Streams

Region 1

Lower Peconic River Survey

The Regional Fisheries Unit, in cooperation with the Bureau of Marine Resources completed a one night electrofishing survey of the lower Peconic River on July 25. The primary purpose of the survey was to look for young alewife to document alewife spawning success in this section of the river. A general assessment of the eel population and freshwater fish community was also conducted. No alewives were observed during the survey, but several hundred eels were observed. The freshwater fish community in this section of the river appears healthy, with good numbers of catchable size yellow perch, sunfish and brown bullhead catfish as well as largemouth bass, chain pickerel and carp.

Region 3

Hudson River Estuary Black Bass Study

The Hudson River Estuary Management Program funded a three year study beginning in 1999 to examine the status of the largemouth and smallmouth bass populations in the Hudson River. The consulting firm of Lawler, Matusky & Skelly Engineers (LMS) was contracted for the study. The last major survey of this type was contracted to Cornell University from 1989-91.

The five primary objectives for the current study are:

1) Estimate the number of black bass greater than 11 inches in the Hudson River Estuary.
2) Locate Smallmouth bass wintering areas.
3) Locate smallmouth bass spawning areas and determine their importance to the fishery.
4) Determine black bass exploitation rate from angling.
5) Determine the effects of repeated catch/ move/release of black bass from tournament fishing.

A brief description of some of the preliminary findings through 2001 follows.

Electrofishing and Tagging

A total of 6,646 largemouth and 1,504 smallmouth bass were jaw tagged between March 1999 and November 2001. Many of the bass (4700 largemouth and 485 smallmouth) were collected during early spring electrofishing of known or suspected wintering areas (Coxsackie Cove, Catskill Creek, Esopus Creek, Rondout Creek, Stockport Creek and Wappinger Creek). The remaining 1,946 largemouth bass and 1,019 smallmouth bass were tagged during tournament monitoring in the summer and fall.

Largemouth bass wintering area abundance estimates in March and April of 1999 and 2000 have remained within the range of previous estimates or increased for Esopus Creek, Rondout Creek and Coxsackie Cove (Table 1). The number of largemouth bass overwintering in Catskill Creek and Wappinger Creek have continued to decline since the mid-1980's. We will look into whether this decline could be an artifact of our sampling design, and if not, we will look into potential reasons for this.

Catch per unit effort of electrofishing varied between 48 and 235 bass/hour for the five sites in 1999 and 2000. This catch per unit effort is similar to or has increased compared to previous studies (Table 2).

Evidence of movement out of and between wintering areas was documented in early April in all years of the study.

Tagging Mortality Study

Three separate studies were conducted to estimate if short term mortality occurred due to the tagging procedure. For two of the studies, a sample of 100 bass were collected via boat electrofishing. In the third study, a 100 fish sample was taken from bass caught during a tournament in September. All 100 fish (25 untagged and 75 tagged) from each study were held in three circular 440-gallon tanks for two days. Only one tagged bass and zero control fish died over the 48 hour periods of these studies. The one tagged bass that died was in poor condition prior to tagging, and may be more indicative of electrofishing or natural mortality than the tagging procedure.

Tournament Monitoring

Black bass tournaments were monitored in the summer and fall of 1999, 2000 and 2001 to gain

recapture information and tag additional bass. Petersen population estimates for the riverwide population of largemouth bass over 11 inches were calculated using this data. The 1999, 2000, and 2001 riverwide estimates for largemouth bass were 22,432, 22,301 and 21,008. This compares to estimates from 1991 of 14,230, 1990 of 14,503, and 1989 of 21,954. Studies by NYS DEC from 1986-1988 estimated the largemouth bass population to be between 30,000 and 37,000 riverwide.

Radio Telemetry

Smallmouth bass movement patterns between overwintering and spring spawning areas were investigated in the Hudson River Estuary between Troy and Kingston. Sixty smallmouth bass were collected by electrofishing from tidal creeks and main-stem shoreline areas during September and October 1999. Radio-transmitters were surgically implanted in these fish. After release, fifty-eight of the fish were subsequently found and tracked through the next year using tracking equipment on foot, boat, and aircraft.

Smallmouth bass overwintered in large tidal creeks as well as deepwater areas of the Hudson River and were generally associated with bridge abutments, rock ledges or protective riprap surrounding navigational light structures. Although most smallmouth bass moved to overwintering areas by mid-January, several individuals continued to exhibit large-scale movements when water temperatures were below 41° F. Smallmouth bass began to move to spring spawning areas during early April. Most smallmouth bass (70%) entered or remained in tidal creeks during the spawning season (late-April through May); including Catskill Creek, Stockport Creek, Hannacroix Creek, Rondout Creek and the Roeliff Jansen Kill. Several fish moved into relatively shallow (<3 feet deep) upstream reaches of the tributaries, beyond previously thought barriers to upstream migration. Smallmouth bass that overwintered in the Hudson River traveled up to 26 miles to spawning areas.

The fish moved between 0.06 mi and 6.08 mi away from release sites. Most fish collected and released within tidal creeks remained within their respective creek throughout the study period. One fish moved into the main-stem of the Hudson River. Fish collected and released along main-stem shoreline areas moved into nearby tidal creeks or to deep-water areas associated with bridge abutments, rock ledges or protective riprap surrounding navigational light structures in the Hudson River. Although most smallmouth bass moved to overwintering areas by mid-January, several individuals continued to exhibit large-scale movements when water temperatures were below 41° F.

Distribution of Information About The Study

An informational poster and pamphlet were designed to inform anglers and the general public about the study. Posters were hung at boat launches and in tackle shops. The pamphlets were distributed to bass clubs and included in tag return response letters. Pamphlets were also carried in the field to help answer questions and aid in continuing with field work without as much time spent explaining what was being done. Final Progress Reports for 1999 and 2000 were completed and reviewed. A Draft Final Report for the study is scheduled for completion in the summer of 2002 with a subsequent Final Report completed in the fall. Summary reports will be periodically updated and sent to tag returners, and used as handouts for presentations and for fishing groups. A PowerPoint presentation was developed and presentations were given to various bass fishing clubs, and at the NYS DEC Bureau of Fisheries Managers Meeting, the Hudson River Estuary Educators Seminar, the Hudson River Estuary Program Managers Meeting, the Annual Meeting of the American Fisheries Society in St. Louis, MO during the Black Bass 2000 Symposium, and the 2001 Northeast Fish and Wildlife Conference held in Saratoga Springs , NY.

Region 4

Mohawk River Study

The third year of a 5-year electro-fishing monitoring program on the Mohawk River was completed. This study is designed to characterize the age and size structure of the smallmouth bass population. The population appears to have become dominated by older and larger fish. This shift in structure may be a product of recruitment failure, as indicated by an absence of young-of-the-year in fall survey work.

Region 8

Chemung River

A survey was conducted to assess current population characteristics of smallmouth bass and walleye and

to evaluate the stocking of 14,000 surplus tiger muskellunge fingerlings during the past 2 years. During August and September 2001, fish were collected from 7 sites in the Chemung River using boat mounted and backpack electrofishing gear. Low water conditions limited sampling to areas near boat launches, which were not necessarily quality smallmouth bass and walleye habitat. A total of 30 species of fish were collected. Smallmouth bass (CPUE=17 fish/h) and walleye (CPUE=8 fish/h) were the dominant gamefish collected. Smallmouth bass averaged 150 mm (SD = 79) and ranged in size from 70 - 363 mm. Only 5% of bass collected were legal size (i.e. >305 mm). Relative weights of smallmouth bass >200mm indicated bass were in good condition. Age distribution and growth rates have not been estimated to date. Walleye averaged 214 mm (SD = 93) and ranged in size from 135 - 551 mm. Only 10% walleye collected were legal size (i.e. >356 mm). Although not yet aged, size distribution of the remaining walleye collected indicate they were probably age 1+ and 2+. Because of sampling limitations (i.e. low water conditions), results may not be representative of the smallmouth bass and walleye adult population. However, reports from anglers indicate that while numerous, smallmouth bass generally do not attain large sizes. Whether this is a result of angler mortality or habitat limitation is unknown. Only a few esocids were observed during sampling and none were able to be collected. We could not tell if these fish were tiger muskies or other esocid species. Recent reports indicate that a few tiger muskies are being caught, however further evaluation needs to be completed before recent stockings could be considered a success.

Central Office-Inland Section

St. Lawrence River Esocid Study

Federal Aid to Sportfish Restoration funded efforts to assess and manage Esocids (members of the pike family) in the St. Lawrence River continued in 2001. Researchers at the State University of New York School of Environmental Sciences and Forestry in Syracuse completed the following activities.

Muskellunge Angler Diary Program

Nineteen diaries were distributed to anglers and five participants returned a diary (26% return rate). Each diary recipient was contacted by mail and by phone to encourage participation and diary returns. Anglers fished a total of 1160.5 hours and caught a total of 47 muskellunge (CPUE = 0.04 fish/hour). All of these fish were released. Mean total length of the catch was 42.5 inches. The total length of the muskellunge ranged from 33 to 58.5 inches.

Monitoring of Juvenile Esocids

Based on the 2001 seining effort, age-0 muskellunge abundance was high and northern pike was low. Age-0 muskellunge and northern pike were monitored in eleven bays using a 30’ seine during the period July 16 to August 8, 2001. The 30’ seine resulted in a total catch of 6 northern pike and 84 muskellunge and 1 grass pickerel. Overall, the CPUE was 0.94 muskellunge per haul compared to 0.06 for northern pike. The grass pickerel was captured at Deer Island. All bays, with the addition of Flynn Bay, were sampled a second time using a 60’ seine during the period August 15 to September 1, 2001. The 60’ seine resulted in a total catch of 4 age-0 northern pike and 48 age-0 muskellunge. Overall CPUE for the 60' seine was ten-times greater for muskellunge (0.40) than for northern pike (0.04). In addition, two grass pickerel were captured at Deer Island.

Effects of Double-Crested Cormorants on Esocid Populations

A total of 300 otoliths recovered from pellets taken from cormorant colonies in the Lake Ontario-St. Lawrence River region were examined. The estimated mean size of northern pike in the diet of double crested cormorants was 270 mm (10.8 inches). The maximum estimated size was 475 mm (19 inches). The estimated age range of northern pike consumed by double-crested cormorants was 1 to 4 years. A complete report, including estimates of consumption will be completed by Spring 2003.

Northern Pike Spawning Marsh Management

Efforts to evaluate the use and reproductive success of northern pike in managed marshes continued in 2001. Twenty male and 66 female northern pike were caught in traps and transferred over the water control structure at Cranberry Creek during the Spring of 2001. Twenty three YOY pike were captured from the marsh in 2001. These fish ranged in size from 1.6 inches in early June to 3.0 inches in early July.

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Coldwater Streams

Region 1

2002 Carmans River Electrofishing

The Region 1 Fisheries Unit with the assistance of the Bureau of Marine Resources, Bureau of Habitat, Forest Rangers, Region 2 Fisheries Unit, Central Office Fisheries, the Coney Island Aquarium and Trout Unlimited, completed a two day electrofishing survey of the Carmans River in Southaven County Park. This is part of an ongoing brook trout management program in this river. Preliminary results show that the brook trout population is strong, with good natural reproduction. More brook trout over 10 inches were caught in this survey than in previous years and young of the year production was also strong. In addition to monitoring the brook trout population, American eels were collected as part of the Marine Resources Program studying the status of the American eel in New York State.

The electrofishing operation was filmed by a crew from WNBC Channel 4 and reported in the 6:00 News on Tuesday, March 19.

Mud Creek Survey

Mud Creek (LI-PB-T183), East Patchogue, was surveyed on June 26, 2001 in cooperation with the Cold Spring Harbor Fish Hatchery. Mud Creek is considered to be a heritage strain brook trout stream with no records of the creek ever being stocked. Despite duck farms that operated along the creek (1938 Biological Survey), brook trout have managed to survive. During the survey, 45 brook trout were captured, ranging from 2.4 to 10.0 inches. The survey also identified, property that was for sale adjacent to the headwaters of the creek. These parcels along with 32 others for a total of about 130 acres were recommended for open space acquisition in the South Shore Estuary Reserve to protect the headwaters of Mud Creek. The Fisheries Unit completed a short report documenting the fisheries history of the creek and the importance of preserving the headwaters of the Creek. The Regional Fisheries Unit will work with the Regional Real Property Unit and other interested agencies to promote the acquisition process for these properties.

Brook Trout Restoration in Beaver Brook

Beaver Brook is a trout stream located in the Shu Swamp Nature Preserve in Mill Neck, NY (northern Nassau County). At one time, brown trout fry were released into the brook. The brown trout established a self sustaining population. Recent surveys were unable to find any brook trout in the system. Prior to the introduction of brown trout, brook trout had been native in the system. The establishment of brown trout apparently extirpated the native brook trout. The Region One Fisheries Unit with the cooperation of the Cold Spring Harbor Fish Hatchery began a program to restore brook trout to the stream in 2001. Because the steam is located in a wildlife sanctuary which does not allow fishing access, the removal of catchable size brown trout from the system was not an issue. On July 26 and August 2, 2001, Beaver Brook, Mill Neck, was electrofished. All brown trout caught were removed, had an adipose fin clip applied, and released into the tidal raceway at the Cold Spring Harbor Fish Hatchery. Between the two days of electrofishing, 51 young of the year brown trout and 43 yearling or older brown trout were removed. In addition to the electrofishing, 200 yearling and older and 500 young of the year Connetquot River strain brook trout (a Long Island heritage strain brook trout) were stocked into Beaver Brook on August 2, 2001. On October 25, 2001, the brook was electrofished once again in an attempt to collect the remaining young of the year brown trout and to determine if any yearling or older brown trout are running up Beaver Brook from salt water to spawn. Three brown trout were caught, one 10.4 inch fish and two young-of-the-year fish (approximately 4 inches). In addition to the brown trout, 83 brook trout were caught on October 25, including 7 yearlings and 76 young of the year from the August 2 stocking. On February 26, 2002, three thousand Connetquot River strain brook trout fry were stocked into the brook to further help establish a brook trout population. Several holdover brook trout were seen during the stocking. Furthermore, trout fry that might have been brook trout were observed in the book. Electrofishing surveys will be conducted over the next several years to determine if the goals of the project, establishing a naturally reproducing brook trout population and total brown trout removal, were achieved..

Region 4

Beaver Kill Study

Completed the second year of a 5 year study of the Beaver Kill/Willowemoc system, with the goal of restoring its wild trout fisheries by improving management of the entire watershed. Partners include Trout Unlimited, Cornell University, and local communities, with partial funding by the US Fish & Wildlife Service. A second year of angler and stream surveys were completed during the summer of 2001 as were physical inventories of flows, temperatures, and water chemistry. The dry summer of 2001 data will provide and excellent contrast to the wet, cool summer of 2000.

Water temperatures were measured on an hourly basis using thermographs at 72 sites on the Beaver Kill and its tributaries. A comparison of maximum water temperatures observed on the mainstem of the Beaver Kill in 2000 and 2001 shows the difference (10° to 15°F) between a relatively wet summer with moderate temperatures (2000) and a dry summer with warmer temperatures (2001). In 2000, only the lowest several miles of the mainstem had temperatures average above 70°F for a week and nowhere did the temperature average exceed 75°F. In contrast, 2001 had one week where stream temperatures averaged 75°F or more up to river mile (RM) 15, and 70°F up to RM 23. Under these conditions, trout would tend to seek out thermal refuge areas, but the high temperatures demonstrate that tributary and spring fed thermal refuges do not contribute enough cold water in comparison to the stream volume to keep the stream temperatures down.

Temperature comparisons for Willowemoc Creek, the major tributary in the Beaver Kill system, demonstrate the same 10° to 15°F increase from 2000 to 2001 for the summer maximum temperature. In 2000, water temperatures did not exceed a 70°F average anywhere on the Willowemoc. In contrast, 2001 had one week where stream temperatures averaged almost 75°F or more from the mouth upstream to the confluence of the Little Beaverkill (RM 7.1), and exceeded a 70°F average up to RM 9.6.

In contrast to the previous year, water temperatures critical to trout survival were recorded in 2001, so a search for thermal refuges was initiated. TU and other volunteers along with DEC staff working on the Beaver Kill project were enlisted to take note of any concentrations of trout seen on the mainstem of the Beaver Kill or Willowemoc that appeared to identify a possible refuge site. Combining observations made by eight staff members and four volunteers, a total of 16 trout concentration sites were noted over the course of the summer. The most consistent thermal refuge, and the largest with trout numbers approaching 300 fish, appeared off the mouth of Horton Brook at RM 7.0 on the Beaver Kill.

Discharge was measured at 38 sites on the Beaver Kill and its tributaries during three different flow regimes over the course of the summer in 2001. Conditions for flow measurement included summer low stream levels and no recent rains in the watershed. While average stream flows at the USGS station at Cooks Falls for the month of August are 212 cfs, the median summer low flow is about 100 cfs (based on 86 years of record). The average weekly streamflow at the USGS Cooks Falls station for the period beginning at the end of April and continuing to early October illustrate the difference between the wet summer in 2000 and the dry summer in 2001. In 2000, flows were higher than the mean with an average reading for August of 271 cfs. In 2001, we measured flows at our sample sites when the USGS station was reading, on average: 231 cfs, 86.5 cfs and 47 cfs.

Water chemistry tests were conducted at most sample locations where temperatures were monitored, flow measurements were taken, or electrofishing samples were collected . Conductivity ranged from 20 to 60 µS in May, 25 to 150 µS in July, and 25 to 100 in early. pH ranged from 6.5 to 8.0 with an average reading of 7.25.

Trout population abundance and biomass estimates on four Beaver Kill tributaries (Horton Brook, Russell Brook, Spring Brook, and Shin Creek) were conducted for the second year at two locations per stream. Two other tributaries (Trout Brook and Horse Brook) were sampled for the first time. This effort will continue through 2004. Estimates of non-trout abundance and biomass will be determined annually. The 2001 results are pending.

The sampling of all tributaries flowing into the Beaver Kill was completed in 2001. General surveys were completed on 34 tributaries of the upper Beaver Kill. Trout were present in 26 streams and

absent in eight streams. Brown trout were collected in 6 streams and brook trout in 26 streams. Brook trout were the dominant trout in 25 streams; brown trout in one. Overall trout biomass in trout-inhabited streams ranged from 2.4 to 169.8 pounds per acre.

Region 5

Batten Kill Electrofishing Survey Completed
A Batten Kill electrofishing survey was finally completed in August 2001. The electrofishing work was postponed in 2000, and on two occasions earlier during Summer 2001 due to high discharges unsafe for electrofishing. During the week of August 6, flows finally decreased to near-normal levels. In blazing heat (air temperatures approaching 95-100E the entire week) and high humidity, fisheries staff conducted electrofishing operations at 7 sites upstream of Route 22. Most of the sites sampled were the same locations sampled in 1999.

New, state-of-the-art stream electrofishing gear built by Principal Fish & Wildlife Technician Les Saltsman and DEC's Bureau of Electronics preformed flawlessly for the entire week.

Brown trout yearling abundance appears to have improved about 800 percent (based on population estimates at one station) since 1999, but is about two-thirds that observed in the mid-1970's. Few two-year-old-size brown trout were collected. Young-of-year brown trout abundance is still excellent. The largest trout collected during the survey was about 18 inches, but a number of large trout were observed in some deeper pools. Brook trout were present in greater numbers than observed in 1999 throughout much of the upper river, possibly the result of high and cool water during 2000 and most of 2001. Samples of all species collected at three sites were submitted to the USFWS pathologists based in Lamar, PA for disease analysis.

Batten Kill Creel Census
Region 5 fisheries staff planned and implemented an eight-month creel census on the Batten Kill to determine fishing pressure and angling quality in 2002. Three creel census agents began conducting angler counts, interviewing anglers to obtain catch information, and key punching data for analysis. In addition, aerial angler counts were initiated and will be conducted periodically throughout the summer. Overall first-year costs are estimated at $90,000.

Stream Trout Stocking Assessment Surveys Conducted
Staff electrofished a number of streams and rivers to assess current stocking policies using Catch Rate Oriented Trout Stocking (CROTS) guidelines. These were the Chubb River and N. Branch Boquet River in Essex County; Negro Brook, Two Bridge Brook and tributary 7 to Two Bridge Brook in Franklin County; Cayadutta Creek, E. Canada Creek and Middle Sprite Creek in Fulton County; the S. Branch W. Canada Creek, N. Branch W. Canada Creek and E. Canada Creek in Hamilton County; and Stony Creek in Warren County.

Schroon River (and tributaries) Landlocked Salmon Fry Stocking Evaluation
The Branch, a major tributary of the Schroon River (Town of North Hudson, Essex County), was sampled at three locations near its headwaters just below Elk Lake to evaluate landlocked salmon fry stocking efforts done for the last two years in that stream section. Despite abnormally low water levels and high water temperatures, good numbers of advanced fingerling and yearling landlocked salmon were caught at all three locations. Wild brook trout were also caught in moderate numbers. The Schroon River at DEC's Sharps Bridge campsite was also electrofished with equally good results in capturing 0+ and 1+ salmon. About 20,000 salmon fry have been stocked annually during this evaluation period. Good survival in the Schroon River suggests this number can be increased, but more work is needed to quantify the amount of suitable habitat available that can be stocked via backpack.

Region 7

Whirling Disease Sampling
Five streams were sampled for whirling disease: Bishop Brook and the West Branch of Onondaga Creek in Onondaga County; Oquaga Creek in Broome County; Cayuga Lake Inlet in Tompkins County, and the Chenango River in Madison County. None tested positive including Bishop Brook which tested positive previously.

Owasco Outlet Catch Rate Oriented Trout Stocking (CROTS) Survey:
An electrofishing survey of Owasco Outlet through the city of Auburn was carried out during July 2001. The primary purpose of this survey was to determine the suitability of this stream for trout stocking to

create an urban fishery. Temperature monitoring 1999 -2001 revealed the potential for summer trout survival. Electrofishing was conducted at Canoga Street, Aurelius Street, Venice Street, Garden Street, Mill Street and just downstream from the State Dam. Length of stream electrofished at these locations varied from 207 feet at Aurelis Street to 1,159 feet at Mill Street. The total length of stream electrofished was 3,658 feet. Generally, the electrofishing catch at each location was considered light. A total of 239 fish (19 species) were collected, processed and released. About the same number of fish were observed but not collected. White sucker, longnose dace, cutlips minnow, smallmouth bass and rock bass were fairly common while rainbow trout and walleye were present but rare. Of the six locations surveyed, the area just downstream from the State Dam possessed the highest quality trout habitat. In light of this, a rainbow trout stocking recommendation for the one mile reach between the State Dam and the Mill Street Dam was submitted and will be initiated in spring 2002.

Butternut Creek Catch Rate Oriented Trout Stocking (CROTS) Survey:
Butternut creek, Onondaga County, was surveyed to revise the stocking policy. There was no policy change resulting from applying the CROTS formula.

West Branch Onondaga Creek Catch Rate Oriented Trout Stocking (CROTS) Survey:
West Branch Onondaga Creek, Onondaga County was also surveyed to revise the stocking policy. The policy was deleted since the upper portion of the stream had adequate wild trout abundance to meet New York trout stream management objectives and a beaver colony in the lower portion eliminated trout habitat.

Region 8

Mud Creek
In September 1996, 50 brown trout ranging in size from 75 - 280 mm were transferred from Cohocton River in Livingston County to Mud Creek in Ontario County. Mud Creek was identified during the 1980's as stream that currently did not support trout but had habitat characteristics that could potentially support trout populations. The trout were stocked along an approximately 1.7 mi stream reach. In July 2001, personnel collected fish samples from 4 areas within the original stocked reach using back pack mounted elctrofishing gear. The purpose of the sample was to determine if trout from the original stocking had survived and created self sustaining trout population had developed. A total of 13 brown trout were collected ranging in size from 61 - 384 mm. Age of fish ranged from YOY to Age 4+. Eight of the 13 fish collected were 1+. It appears that brown trout were successfully introduced into Mud Creek. Although relatively few trout were collected, several age classes were represented. No fish from the original stocking were collected.

Oatka Creek Electrofishing Survey
This is the fourth year of a wild brown trout population assessment to evaluate the effects of a No Kill trout fishing regulation. The September 2001 survey represents the first post-regulation change survey. On October 1, 2000 the trout fishing regulations in a special regulations area of the stream was changed from 12 inch minimum size, three trout per day creel limit to no kill. The season remains year round and only artificial lures can be used. Data analysis is still underway, but late season standing crop estimates are quite variable between the three years. Three years of post-regulation change assessments are scheduled.

Catharine Creek Electrofishing
Staff annually sample the adult rainbow trout run from Seneca Lake into Catharine Creek. A one day electrofishing effort captured 156 fish. Scale samples have not been aged so the data has not been analyzed. Sea lamprey wounding did not appear excessive and many large fish, to nearly 10 pounds, were handled. Age analysis of the large rainbow trout will prove very enlightening.

Region 9

Wiscoy Creek
An angler diary program and a late summer electrofishing survey were conducted on the 15 mile section of Wiscoy Creek that is in Wyoming County in 2001. Study objectives included determination of late summer wild brown trout biomass and trout population dynamics associated with a no-kill regulation as well as angler catch rates. The weighted average for late summer wild brown trout biomass was 155 lb/acre. However, biomass averaged over 300 lb/acre in the no-kill section. The density of 1+ and older trout averaged over 1700 fish/mile, but was about 3000 fish/mile in the no-kill

section. The no-kill regulation has increased the number of 1+ and older trout, but has had no effect on increasing the number of large (>16 in (406 mm)) trout. Angler catch rates were 1.2 trout/hour (±0.12 at 95% CI) during the diary program and were higher in the no-kill section by 50%. Even though Wiscoy Creek has a 10 inch (254 mm) minimum size limit (other than the no-kill section), there was a 96% release rate for legal size fish. Anglers caught trout in about the same size proportion as they appeared in the population based on the electrofishing survey.

Mansfield Creek

Water temperatures in Mansfield Creek, a stream supporting substantial populations of wild brown trout (*Salmo trutta*) and wild rainbow trout (*Oncorhynchus mykiss*), were monitored from late June to early September, 2001. We used automated thermometers set to record temperatures 24 hours per day at eight sites on Mansfield Creek itself and two sites on an important tributary, Goodell Creek. The western New York area experienced a severe drought and high air temperatures in the summer of 2001, giving us a chance to see how stream temperatures responded to such extreme weather conditions.

Ideal water temperature regimes for survival and growth of wild trout were found at three of the eight sites on Mansfield Creek and one of two sites on Goodell Creek. The headwater site on Mansfield Creek and two sites below where Mansfield Creek's water emerges from flowing underground for a substantial distance never experienced daily high water temperatures exceeding 70^0F. The upper site on Goodell Creek, where the stream is well shaded, never experienced daily high water temperatures exceeding 70^0F**.** The lower site on this stream, below an open pasture, exceeded 70^0F on 20 days. At the sites where water temperature regimes were higher than ideal for wild trout, a lack of vegetative cover to shade the stream was the major cause. Some of those sites did benefit from enough ground water recharge at night for their overnight low temperatures to drop to 60^0F or lower. There was a statistically significant relationship ($P< 0.05$) found between the number of days where the daily high water temperature exceeded 70^0F and the estimated wild brown and rainbow trout population at the site, based on 1999 electrofishing surveys.

Mansfield Creek has the potential to support a high quality wild trout fishery throughout the upper half of the stream if riparian vegetation cover can be established and maintained. The local chapter of Trout Unlimited and other private groups should be encouraged and supported to work with the agricultural community in the watershed to improve riparian conditions.

Catch Rate Oriented Trout Stocking (CROTS) Surveys:

In the summer of 2001, eight stocked trout streams were surveyed utilizing the CROTS methodology to update their stocking policies. Most of the Region's streams were originally surveyed under CROTS in 1990-1992, meaning that they have not been done in about a decade. We are attempting to resurvey 8-10 stocked streams each season to "catch up". The hope is to get all our stocked streams onto a minimum 10-year rotation of surveys.

The eight streams surveyed were: Chenunda Creek, Hunt Creek, Elton Creek, Forks Creek, Haskell Creek, Chautauqua Creek, Prendergast Creek and E. Branch Cazenovia Creek. Based on the 2001 survey, one stream was removed from the stocking list (Prendergast Creek) due to a high wild brown trout population and another stream (Elton Creek) had a significant section removed from stocking due to a high wild brown and rainbow trout population. Four of the stream's stocking policies remained the same, one increased (Forks Creek), and one (Chautauqua Creek) decreased due to access problems.

Central Office - Inland Section

Beaver Kill Watershed Trout Study

Inland staff continued coordination of Region 3, Region 4, Cornell and Trout Unlimited activities in a second year of determining the status of the Beaver Kill - Willowemoc Creek trout fishery and identifying trout resource limits and potentials. The Beaver Kill Study includes a complete angler use and creel survey, extensive fish population electrofishing surveys, water temperature and flow monitoring and a variety of habitat inventories and projects. Monthly coordination meetings were held with project leaders to plan field collections and review findings. Inland staff provided data entry and data management services for the study and collated a progress report covering year 2000 results.

Coordination with NYSDOT staff continued regarding potential problems and opportunities associated with the pending I-86 highway project. A presentation on the Beaver Kill Study and trout habitat requirements was made at a DOT training workshop in March.

Electrofishing surveys were completed on 57 tributary streams and 13 mainstem reaches. Wild trout populations (mostly brook trout) have been documented in 67 of the 87 Beaver Kill tributaries. Thirty six of the Willowemoc tributaries have been sampled to date with the remainder to be surveyed in 2002. Sampling in the mainstem Beaver Kill and Willowemoc yielded density estimates ranging from 7 to 267 trout per acre. Wild trout densities ranged from 4 to 126 per acre with highest values in the upper Willowemoc.

Water temperatures were again monitored on an hourly basis using recording thermographs at 72 locations. Water temperatures during 2001 were substantially higher than those observed in 2000. Temperatures averaged over 70E F for an entire week in the Beaver Kill all the way upstream to Berry Brook (river mile 23) and in the Willowemoc upstream to the mouth of the Little Beaver Kill. During the relatively cool and wet summer of 2000, weekly average water temperatures never exceeded 70E F except for the lower-most reach of the Beaver Kill. Stream flows in 2001 were below long term average low flows for much of July, August and September. At the lowest flows, Willowemoc Creek contributed 60% of the flow to the Beaver Kill below its confluence at Junction Pool.

Coldwater Fisheries Research Projects

The cooperative Coldwater Fisheries Research and Management project continued with Cornell University. Progress was made toward an initial evaluation of the Trout 4x4 population model and current stocking policies (CROTS). The Trout 4x4 model provides the theoretical basis for the recommended stocking rates listed in the CROTS manual. Activities included rewriting the spreadsheet-based version of the Trout 4x4 model using Visual Basic, with the result being much more user-friendly then the spreadsheet version, and more adaptable for specific purposes in the future. A pilot study in Lewis County that included a creel census, fish population data, and stocking rates was completed with the expectation that the data will be used as part of the Trout 4x4 model evaluation. Cornell has also begun to gather additional, existing fish population data from across the state for use in the model evaluation. As part of Lewis County work, improved statistical methods and computer software were developed for making fish population estimates. These programs have been provided to Bureau of Fisheries staff for evaluation. Finally, GIS-based models to predict stream flows and temperatures from landscape-level data were developed, and a number papers are being prepared for submission to scientific journals reporting on the results.

Two-Story Lakes and Ponds

Region 1

Deep Pond Survey

The Region 1 Fisheries Unit completed a two day gill netting survey of Deep Pond on the Schiff Scout Reservation in Wading River. The primary goal of the survey was to assess the status of the trout that have been stocked in the pond since 1999. Although the pond appears to provide suitable habitat to support trout, anglers have not reported catching any trout. In five net nights of gill netting, no trout were caught. The gill net catches included chain pickerel up to 4.5 pounds, yellow perch up to 2.0 pounds and golden shiner. The Regional Fisheries Unit will complete the survey of the pond in May with electrofishing and hoop nets and then, in consultation with the Boy Scouts, determine what future management priorities should be for the pond.

Region 3

Kensico Reservoir

Since 1987 the New York State Department of Environmental Conservation has been utilizing angler diary information to better understand Kensico Reservoir's trout fishery. Analysis of 2001 angler diary data revealed that the trout fishery has become increasingly dominated by lake trout with this species now contributing 98 % of the cooperating anglers catch vs. 2 % for brown trout. In 2001 natural reproduction appeared to be contributing approximately 45 % of the lake trout present in the reservoir. Although now abundant at sizes up to and slightly above the 21 inch minimum size limit, a relative lack of larger and older lake trout suggests that Kensico Reservoir may have become over stocked with lake trout. Given the increase in lake trout abundance, it is likely that many of the approximately 10,000 nine inch brown trout yearlings stocked annually are now being consumed by lake trout. In an effort to improve growth rates for lake trout and increase the number of larger lake trout (26 inches and larger), as well as improve the survival of brown trout, the annual stocking recommendation for lake trout was reduced from 7,200 yearlings to 3,600 effective in 2000. The diary program will continue to be used to monitor the fishery.

New York City Croton System Reservoirs

In 2001 fish were collected for toxic substance analysis from Boyd Corners, Croton Falls, Cross River, Kensico and New Croton Reservoirs. In 2002 additional fish have been collected at Amawalk, Diverting, Muscoot, Titicus, West Branch and Middle Branch Reservoirs. At each reservoir the goal has been to collect 10 edible/legal sized fish which people prefer to consume. Preferred species include smallmouth bass, walleye, brown trout, lake trout, yellow perch and largemouth bass. Since not all of these species can be collected in each reservoir other edible fish, such as carp, white perch and black crappie, have been collected in some cases. Based on analysis conducted on fish collected during 2001, the New York State Health Department issued a health advisory against eating more than one meal per month of largemouth bass larger than 16 inches and walleye (all sizes) from Boyd Corners Reservoir, and an advisory against eating more than one meal per month of largemouth bass and smallmouth bass larger than 16 inches from Cross River Reservoir. In both cases elevated mercury levels were cited as the reason for the advisories. Additional reservoirs scheduled for collections in 2002 include Bog Brook and East Branch.

Region 4

Otsego Lake Sampling

A multi-year angler cooperator program on the 4,200 acre Otsego Lake began in 2000. The purpose of this study was to monitor the quality of the cold water fishery for lake trout, brown trout, and landlocked Atlantic salmon. For 2000, 31 anglers volunteered to keep diaries with 14 actually returning diaries with fishing trip information. These 14 anglers made 263 fishing trips (includes partners) totaling 1293.6 hours. They caught 310 lake trout, 69 brown trout, and 51 landlocked salmon for an overall salmonid catch rate of 0.33 fish/hour. The lake trout catch rate averaged 0.24 fish/hour and 0.11 legal ($21 in) fish/h. The catch rate for brown trout and landlocked salmon were 0.05 and 0.04 fish/h, respectively. By statewide standards, the open water fishery for lake trout, brown trout, and landlocked salmon are average.

2001 returns by 21 anglers making 484 trips totaling 2,163.9 hours indicate that fishing success was similar. Ice fishing catch rates were very similar to boat fishing, being 0.20 vs 0.27 fish per hour respectively. Boat anglers in 2001 averaged 0.27 all size and 0.16 legal lake trout per hour compared to 0.24 all size and 0.11 legal lake trout per hour in 2000. Mean length of lake trout caught by boat anglers in 2001 were greater than 2000. The higher catch rate and larger average size for lake trout by boat anglers in 2001 suggests that the previous winter's ice fishery had no appreciable effect on the lake trout population. Results for brown trout were similar. To further protect the largest lake trout, effective October 1, 2002 there will be a creel limit of one (1) Lake Trout 27 inches and larger per day.

In response to the numerous concerns about the impact of the 2000/01 ice fishing harvest of lake trout on Otsego Lake, the lake was netted in mid-September 2001. The net catch of 13.5 lake trout per net was the highest ever recorded and is apparently due to strong 1998 and 1999 year classes of wild and hatchery fish. Twenty two legal sized lake trout were caught in 2001 compared to 17 in 2000.

Greens Lake Surveyed

A survey of Greens Lake (Greene County) was also conducted. Greens Lake is a 43 acre two-story water which is currently stocked with brown and rainbow trout yearlings. For the last several years, kokanee fingerlings have been experimentally stocked. Sampling was conducted in late summer using both boat electrofishing at night and gill nets. The catch rate by boat electrofishing for legal size largemouth bass was 9 fish per hour. One legal pickerel per hour was also sampled. From the gill net sets, alewives were captured for the first time in the lake. One net set on the 20 ft bottom contour caught 7 brown and one rainbow trout. No kokanee of any size were taken, either by electrofishing or gill nets. In combination with the lack of anglers reporting catches of kokanee and the lack of kokanee in our sample, the presence of alewives necessitates a change in the fisheries management plan for the lake. Kokanee were not stocked in 2002 and will not be stocked in the future. Other changes for the lake's management plan are being considered.

NYC Reservoirs

The summer and fall drought throughout the Catskills in combination with large water releases has resulted in significant drawdowns of two of the three NYC reservoirs within the Region. As of mid-November, Cannonsville and Schoharie Reservoir were approximately 8% and 10% of capacity, respectively. While water levels have recovered some in early 2002, the impact on reservoir fish populations remain unknown. Full impacts will have to be evaluated through further sampling later in 2002. The failure of Cannonsville Reservoir to spill or significantly refill by June 1, 2002 may have severe repercussions on the high quality West Branch Delaware River tailwater trout fisheries. Inadequate summer cold water releases may adversely impact wild brown trout populations and could result in fish kills. Low summer flow conditions will negatively impact the fishing tourism industry. Hopefully, this is a scenario that will not occur.

Flooding in the upper Schoharie Creek basin in January 1996 due to the quick thaw of a deep snow pack along with heavy rains, exposed clay lenses and destabilized clay banks along the Batavia Kill, Little West Kill, and the West Kill. These streams continue to be a major source of turbidity to Schoharie Reservoir, Schoharie Creek, and the Mohawk River during high runoff events. Longstanding turbidity problems resulted in a lawsuit by Trout Unlimited alleging unlawful discharges of turbid water from the Schoharie Reservoir into Esopus Creek by the NYC DEP. These claims, initially rejected by the courts, have been upheld in subsequent appeals procedures. The most recent appeal is scheduled to be adjudicated in January 2003. This suit has the potential to significantly change water management on the Schoharie and Esopus systems.

The Schoharie Conservation Council, TU, and other advocacy groups are pressing for releases from Schoharie Reservoir for cold water fishing below the dam. Several Legislators are following these developments closely. With the exception of approximately 1.9 miles between the reservoir and the Blenheim/Gilboa impoundment, cold water releases would not be expected to survive downstream of Blenheim/Gilboa. However, additional releases could benefit a variety of warm water species throughout the lower Schoharie valley. The Department supports this proposal as long as it does not negatively impact the Delaware tailwater fisheries downstream of Cannonsville and Pepacton reservoirs.

Region 5

Lake Champlain Sea Lamprey Control Public Meetings Held

Two public meetings were held to gather input regarding the recently-released Draft Supplemental Environmental Impact Statement (DSEIS) proposing a long-term sea lamprey control program for Lake Champlain. Sixty registered attendees voiced their support for the program and one dissenting opinion was voiced at the first meeting held March 28 at the Willsboro, NY Central School. The second was held at the South Burlington, VT High School, where 80 registered attendees voice mixed opinions. The majority were in favor of the proposed program.

Environmental Impact Statement on Sea Lamprey Control is Available

The document: "A Long-term Program of Sea Lamprey Control in Lake Champlain, Final Supplemental Environmental Impact Statement" was completed and became available to the public. Sea lamprey control is proposed for certain tributaries to Lake Champlain in New York, Vermont, and the Province of Quebec. A variety of control techniques would be employed depending on site specific considerations in each lamprey spawning stream. Substantial biological, recreational and economic benefits are anticipated if the program is undertaken. The several hundred page long impact statement can be obtained from the DEC office in Ray Brook; an electronic version is available at the web site: www.fws.gov/r5lcfwro/lamprey/dseis.html.

The US Fish and Wildlife Service Issues Record of Decision to Begin Long-term Sea Lamprey Control in Lake Chaplain

The US Fish and Wildlife Service issued its record of decision concerning the Final Supplemental Environmental Impact Statement: "A long-term Program of Sea Lamprey Control in Lake Champlain." The record of decision selected the proposed action (i.e. to conduct an integrated, long-term sea lamprey control program on Lake Champlain). The environmental impact statement (EIS) and the control program represent a major cooperative effort between the US Fish and Wildlife Service, the Vermont Department of Fish and Wildlife, and the New York State Department of Environmental Conservation. The record of decision is the final approval step in the EIS process, but permits from the states of New York and Vermont will be needed for various aspects of the program. Lewis Creek in Vermont and several rivers in New York are expected to be treated during fall 2002.

Lake Champlain Sea Lamprey Control is Challenged

The Vermont Public Interest Research Group, National Audubon Society, and Sylvia Knight filed a lawsuit to stop sea lamprey control in Lake Champlain. The suit alleges that the Final Supplemental Environmental Impact Statement (FSEIS) on sea lamprey control failed to consider several important potential impacts. After reviewing the plaintiffs' claims, staff involved in developing the FSEIS consider allegations to be invalid. The lawsuit specifies the US Fish and Wildlife Service (USFWS) as the defendant. However, because sea lamprey control is a cooperative program, the NYS Department of Environmental Conservation and the Vermont Department of Fish and Wildlife have petitioned the court successfully to become interveners supporting the USFWS in the case. NYSDEC staff have been involved in legal defense of the program.

Great Sacandaga Lake Surveyed

Great Sacandaga Lake was netted to assess the relative success of the surplus trout and landlocked salmon stockings by DEC, as well as the annual trout stockings conducted by the Great Sacandaga Lake Fisheries Federation. A total of 37 net-nights yielded 40 smallmouth bass, 35 walleye, 2 rainbow trout and 1 brown trout. Numerous other fish species, including rock bass, yellow perch, carp and suckers, were also captured. It appeared the captured trout were from spring 2001 stockings, although scale aging may indicate the fish were holdovers from previous stockings. There is a high quality smallmouth bass fishery in the lake, as many of the captured smallmouth bass were in good condition with lengths up to 18".

Lake George Landlocked Salmon Growth Remains Excellent

Landlocked salmon scales collected from Lake George last fall were aged and the mean length of each age class summarized. The aging reveals that mean length of two-year-olds increased from 16.9" in 1995 to 19.7" in 2000. Mean length of two-year-olds was 19.6" in 2001. Mean length of three-year-olds increased from 19.7" in 1993 to 22.4" in 2001. Steps to improve salmon survival by stocking larger salmon in June and October are underway by the Department.

Tupper Lake Surveyed

Region 5 staff sampled Tupper Lake (R-P109), Franklin County several times in 2001 to assess the landlocked salmon and lake trout stocking policies and to collect fish for DEC and EPA Toxic Substance Monitoring Programs (TSMP).

Initial survey efforts began on April 23, 2001 (ice out on Tupper Lake) and ended on April 27th. Two trapnets were set in Raquette Pond and one was set in Simon Pond to collect pre-spawn northern pike and brown bullhead for toxic substance analysis. On April 27th, a crew boat-electrofished the Raquette River to collect walleyes for TSMP. All fish caught were measured; gamefish species were also weighed and scale-sampled to assess growth rates. All fish except those kept for TSMP were released alive and in good condition. Sampling results were:

Species	No. Caught	Size Range (in.)
Brown Bullhead	176	6.8 - 13.3
Northern Pike	66	15.5 - 39.0
Walleye	27	16.4 - 26.4
Yellow Perch	11	4.8 - 6.8
Pumpkinseed	9	5.0 - 8.5
Rock Bass	5	6.6 - 8.6
Largemouth Bass	2	14.6 - 17.8
Golden Shiner	1	7.1

Tupper Lake, was gill-netted at 14 locations between August 22 - 24th to assess coldwater stocking policies for landlocked Atlantic salmon and lake trout and to capture additional fish for toxic substance monitoring. Juvenile lake trout gill-net gangs (1.5-2.0-2.5 inch meshes, 300 foot total gang length) and gangs of variable mesh Swedish experimental nets were set along deepwater contours for lake trout, or suspended in the thermocline for salmon. Fish caught were:

Species	No. Caught	Size Range (in.)
Lake trout	28	7.5 - 23.9
Cisco	17	8.5 - 15.5
Walleye	5	13.8 - 25.5
Yellow perch	57	5.3 - 9.6
Rainbow smelt	21	3.2 - 8.0
Smallmouth bass	6	13.0 - 17.6
White sucker	2	17.8 - 18.5

Currently, Tupper Lake is stocked annually with 5,700 yearling landlocked salmon and 10,000 yearling lake trout (these fish range from 5-8 inches at stocking).

Eleven of the 28 lake trout caught were unclipped and presumably a result of natural reproductive success.

Landlocked salmon do not appear to be surviving in Tupper Lake, although there is an abundant population of rainbow smelt available as forage.

A surprising result of this survey was the number and quality size of cisco captured. Past surveys of Tupper Lake have caught lake whitefish and relatively few cisco. No lake whitefish were netted in 2000, but cisco are an untapped fishery resource in Tupper Lake.

The number of walleye and smallmouth bass caught is not representative of populations available of these species because few gangs were set in suitable, shallow water habitats.

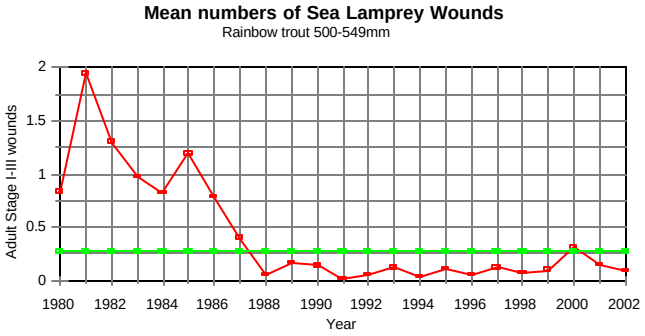
Meacham Lake Surveyed

Meacham Lake, in the Town of Duane, Franklin County, was gill-netted on two nights in late June and early July to assess stocking policies for landlocked Atlantic salmon and two-year-old brown trout. Fish were also collected for toxic substance (TSMP) analysis since there is a health advisory on eating yellow perch from Meacham Lake due to elevated mercury levels. Gill-nets were suspended in the thermocline to focus on catching salmonids. No landlocked salmon were caught; however, 30 splake and 3 brown trout were netted along with rainbow smelt, yellow perch, golden shiner, brown bullhead, white sucker, northern pike and smallmouth bass. The lack of salmon in the Meacham Lake sample is perplexing, the Region has received several anecdotal reports of good salmon fishing during the spring smelt run in Meacham Lake.

Rollins Pond Surveyed

Rollins Pond, in the Town of Santa Clara , Franklin County, was sampled with suspended gill-nets to assess a landlocked Atlantic salmon policy. Rollins Pond is bordered by a popular DEC campground. A single four-pound salmon was captured along with numerous rainbow smelt (the preferred forage species for salmon). A few smallmouth bass were also netted, and anglers fishing the pond reported

catching large northern pike. Survey staff noted that the shoreline stocking point for salmon is along a large, shallow bay. It is likely that recently-stocked salmon are prone to predation from bass and pike here. A switch to air stocking salmon in deeper water should improve survival. Growth of salmon in Rollins Pond appears to be excellent.



Region 7

Owasco Lake Walleye Cooperator Program

In a cooperative effort with DEC, the Owasco Lake Anglers Association (OLAA) has stocked Owasco Lake with pond reared walleye fingerlings since 1996. In 2001 the association produced 33,000 walleye from ponds stocked with fry obtained from the Oneida Fish Hatchery. Most of these fish were from 2 to 3 inches in length when stocked. The OLAA stocked walleye fingerlings in September 2001 that were 3.5 to 7.5 inches in length. Walleye were boat stocked as well as shore stocked at several locations around the lake. Region 7 fisheries staff participated in the walleye harvest and stocking.

Owasco Lake was electrofished at night during fall 2001 to evaluate walleye stocking success. A total of 12 walleye were collected in 4.2 hours of electrofishing, which yielded a catch rate of 2.8 walleye/hour. The 1996, 1997, 1998, 1999 and 2000 fall electrofishing catch rates were 3.6, 2.0, 5.1, 3.8 and 4.2 walleye/hour, respectively. As in each year since 1997, a combination of established sampling sites and new sites were electrofished. Of the 12 walleye collected, 10 were young-of-year (fingerlings) with a length range of 5.8 to 9.0 inches. The other two walleye collected were 20.1 and 19.0 inches in length and scale aged as 5 and 3 years old, respectively.

The Owasco Lake Anglers Association has stocked an average of 34,455 pond fingerling walleye in Owasco Lake each year since 1996. Electrofishing and angler cooperator data indicates a significant walleye population and fishery have been created by these stockings.

Dutch Hollow Brook, entering Owasco Lake at Burtis Point, receives a large spawning run of walleye. Regulations prohibiting fishing and smelt dipping in this stream from the mouth to Route 38A to protect spawning walleye will go into effect October 1, 2004.

Otisco Lake Walleye Evaluation

The lake was surveyed in mid-October, 2001 to determine if we could find any walleye younger than age 3. No hatchery walleye had been stocked in the previous 3 years, thus any fish younger than that age would have been wild fish and would have indicated successful natural reproduction. We were unable to capture any fish in these age classes in this survey as well as in surveys in the previous two years.

There are two possible reasons why walleye are apparently not able to reproduce successfully in Otisco Lake. The first is that alewives are very abundant in the lake and will readily consume young walleye fry. The second is that alewives contain an enzyme in their body that breaks down thiamine. If adult walleye eat enough alewives in their diet the result is a shortage of this vitamin. If the shortage is acute enough, walleye eggs will not produce fry that survive.

The catch rate for adult walleye declined again in the fall of 2001. In 1997 the electrofishing catch rate was 56 fish per hour, whereas in the fall of 2001 it was only 2.8 fish per hour. Anglers enjoyed good fishing for walleye from 1998-2000. The catch of walleye was particularly high in 2000. The combined catch of adult fish during these three years undoubtedly caused a substantial reduction in the catchable population. We believe that stocking is required to maintain a fishery and have submitted a recommendation for pond fingerling stocking.

Cayuga Inlet Fishway Monitoring

Operation of the Cayuga Lake Inlet fishway continued. A total of 340 rainbows and 10,232 white suckers were passed upstream while 121 adult sea lampreys were killed to prevent spawning. Rainbows were also sent to the Bath hatchery for the production of Finger Lakes Wild (126,000 eggs) and hybrid (30,000 eggs). After spawning the adults

were returned to the Inlet. All rainbows were examined for sea lamprey attacks. The mean number of adult stage I-III wounds on trout in the 500-549 mm length group is 0.09, well below the threshold for treatment (0.27). Sea lamprey control on Cayuga Lake Inlet, the primary spawning and nursery habitat for lampreys, is done primarily by removing adult lampreys from the fishway, preventing access to spawning habitat. In addition, unit staff assisted USGS staff with a research project where rainbow trout migration distances were attempted to be correlated with thiamine levels. Rainbows were collected at the fishway, tagged and some injected with thiamine and released. Collections were made by anglers and electrofishing at various upstream locations.

Region 8

Aquatic Nuisances Species / Finger Lakes Zebra Mussel Monitoring and Ecological Assessment Program (FLZMAP)

The FLZMAP program completed its seventh year of data collection in 2001. This data set may be the longest continuous running data set on the western Finger Lakes. Data indicate that the western Finger Lakes represent all trophic states includingoligotrophic (Canadice, Canandaigua, Seneca), meso-oligotrophic (Hemlock, Keuka), mesotrophic (Conesus), eutrophic (Honeoye).

With the exception of Canandaigua and Conesus Lakes, the 2001 chlorophyll a and Secchi transparencies continued to show an increase in water quality. Canandaigua Lake showed a 22 percent decrease in transparency in 2001 over the 1995-2000 average (6.4m vs 7.8m) and corresponding 67 percent increase in chlorophyll a (2.19 mg/L vs 1.31mg/L). It is thought that this decrease in water quality could be related to a massive zebra mussel die off. Fisheries staff will work with area colleges and Universities during the summer of 2002 to study the situation. Conesus Lake had a slight decrease in transparency in 2001 compared to the 1995-2000 average (2.6m vs 3.0m) and a corresponding slight increase in chlorophyll a. (7.91mg/L vs 7.03mg/L).

Great Lakes

Lake Ontario and tributaries

Region 6

Cormorant Management
The goals of cormorant management in eastern Lake Ontario are:1) restoring the structure and function of the warmwater fish community2) reducing the negative impacts of Double- crested Cormorants on nesting habitats and other colonial waterbird species. 3) improving the quality of smallmouth bass and other fisheries and 4) fostering a greater appreciation for Great Lakes colonial waterbird resources. Management of cormorant colonies in NY has involved egg oiling, nest removal, harassment of migrant cormorants and habitat modification. There has been no lethal control of adults or chicks. Results of egg oiling at Little Galloo Island include: 1) reduced cormorant reproductive success by 95+ % at L. Galloo I. 2) reduced overall fish consumption by 4.8 million fish by LGI colony (19%) and 3) reduced consumption of smallmouth bass by 400,000 fish by LGI colony. Recent declines in the number of nesting cormorant pairs are consistent with oiling effect models.

Thousand Islands
The warmwater fish stock assessment program on the Thousand Islands section of the St. Lawrence River provides standardized indices of abundance for major gamefish and panfish stocks, information on year class strength, and age and growth relationships of these stocks. Information obtained is used to evaluate and, if necessary, modify existing fishing regulations. It also provides baseline information for evaluation of environmental disturbances. Results of 1999 sampling with the greatest management significance include : 1) Northern pike abundance continues to decline, recruitment remains relatively poor (this is probably a habitat effect) and 2) smallmouth bass abundance is still depressed (this is a recruitment issue that may be a result of cold spring water temperatures and cormorant predation).

Eastern Lake Ontario Tributaries
The steelhead fishery in eastern Lake Ontario tributaries is believed to have been in decline for several years. The objectives of this Federal Aid creel survey are to provide estimates of fishing effort, catch & harvest rates and angler residence for the lake-run salmonid fishery in major Jefferson County Lake Ontario tributaries. A pilot study was conducted in spring 1999. Sampling of a full steelhead spawning run fishery began in September - December 1999 and recommenced in March and September 2000.

Steelhead spawning runs begin in late fall and continue into mid spring. Preliminary results (1999-2001): Black River: annual effort 18,228-22,355 angler-hours; annual catch 1042-1282 chinook, 381-979 steelhead. N & S Sandy Creeks: annual effort 30,026-57,071 angler hours; annual catch 1815-5884 chinook, 738-1680 steelhead. Steelhead catch rates in the fall and spring 1999-2001 were well below historical levels on North and South Sandy Creeks and on the Black River. Total fall salmonid fishing effort and total salmonid catch were also low. The majority of anglers on the Black River were local (from Jefferson County). The majority of anglers on North Sandy and South Sandy Creeks were non NYS residents . Anglers from Lewis, St. Lawrence, Oswego and Onondaga counties represented the largest groups of non-local NYS resident anglers. Anglers from Pennsylvania and New Jersey comprised the largest groups of non-resident anglers.

Eastern Basin Chinook Study
The major objectives of this study are to examine the homing, straying and return-to-the-creel of morpholine exposed versus non-exposed chinook and non- exposed cage reared versus direct released (normally stocked) fish. Secondarily we monitor some characteristics of walleye and smallmouth bass populations in the Snowshoe Bay/Association Cut area and the steelhead run in the Black River at Dexter. Generally, indications are that chinooks exposed to morpholine in cages and those that were caged only, return to the creel better than the average chinook stocked in Lake Ontario. Both treatments stray to the Black River at similar rates. This suggests that survival is above average for both caged treatments. Fish released directly into Snowshoe Bay returned to the creel at near average or less than average rates. Although “soft release” effects may contribute to this improved survival, the major advantage of caging may be to release larger fish without sacrificing imprinting on the receiving

water. The greater return of morpholine exposed fish to the Snowshoe Bay area is consistent with the hypothesis that morpholine exposure improved the homing performance of these fish. Data on returns of chinooks exposed to morpholine in hatchery tanks is not yet conclusive but suggests that tank exposure has a lesser effect. In 2000 and 2001 there were poor returns of both experimental and control fish, which may indicate that under current water clarity and cormorant predation levels, Snowshoe Bay is no longer a favorable location for chinook stocking.

Atlantic Salmon in the Black River
Atlantic salmon management in the Black River began in 1990 with a pilot stocking of 7,500 spring yearling Atlantic salmon. These fish were of the Little Clear strain, raised at N.Y.S.D.E.C's Adirondack Hatchery. From 1991 through 1995 some 300,000 yearling (63,000 annually), and 95,000 fingerling (19,000 annually) have been stocked in the Black River by N.Y.S.D.E.C. The U.S. Fish and Wildlife service provided 23,000 experimental Grand Lake strain Atlantic salmon in 1994.

Atlantic salmon harvest in the Black River was not detectable by a direct contact creel survey through 1993. In 1994 an estimated 100 Atlantic's were harvested and in 1995 there was an estimated harvest of 200. In 1996 and 1997 Atlantic salmon harvest remained at the trace level. Fishing effort directed specifically at Atlantic salmon was too low to quantify from 1990 through 1997. By comparison, the chinook salmon fishery, which had not been actively managed in the Black River since the late 1980's, supported a fishery of 4,000 to 11,000 angler-days and harvests of up to 7,000 fish annually.

The potential for Little Clear strain Atlantic salmon to provide a fishery in the Black River is apparently quite limited, although occasional reports of good fishing for Atlantics are received and interest in the fishery persists. The potential for even limited management effort to enhance fishing opportunity appears to be much more promising. As a result, Atlantic salmon management in the Black River has been de-emphasized in order to allow increased management of chinook salmon. From 1996 to the present stocking of Atlantic salmon has been maintained at 25,000 yearlings and 25,000 fingerlings annually.

Chaumont Bay/Black River Bay fish survey and summary of historic records:
Based on samples at 93 shallow-water sites in Chaumont-Black River Bay in 2000-01, changes in the fish community were minor. Even though other deeper water studies have shown differences in the balance among the species, 67 of the 76 species known to this area in the last 30 years are still here. Also in the last 30 years, there have been added another 30 species not previously caught here. Only six species have shown historic losses or reductions, including Atlantic salmon, blue pike and muskellunge. Sportfish catch rates with gill nets and electrofishing were highest for yellow perch, brown bullhead and pumpkinseed.

Region 7

North Sandy Pond Walleye Assessment
A fall electro-fishing survey of North Sandy Pond, an embayment of Lake Ontario in Oswego County, revealed successful natural reproduction of walleye in 2001. The pond was stocked with pond fingerlings from 1996-2000. Catch rate for YOY walleye was 1.98/hour which was higher than the catch rate in a 1997 survey (1.15/hour) when stocking was occurring.

Oswego Net Pen Project
Tag returns from the Oswego net pen steelhead study continue to come in. Paired plantings of pen reared and traditionally stocked fish were done 1998-2000. All of the fish were adipose clipped and lots were uniquely identified with coded wire tags. To date, returns overwhelmingly favor the pen reared fish from all return locations. Overall, 61 of 73 tags in hand are from pen reared fish: 23 of 30 returns from the Oswego River were pen fish, 35 of 39 returns to Salmon River Hatchery were pen fish, and 3 of 4 returns from Lake Ontario were pen fish.

Salmon River Steelhead Stocking Site Study
Another steelhead study in progress is the Salmon River stocking study. Fish were stocked at 4 sites, the smolt release pond at Salmon River Fish Hatchery (SRH) -Beaverdam Brook, the pumphouse at SRH (main stem of the river), the estuary and boat stocked off the mouth of the river 1999-2001. These fish are all finclipped LV or LVAD and the different lots are identified by post-ocular injections of flourescent elastomer. Initial returns of age 3 fish to SRH in the spring of 2000 heavily favored fish

stocked in the smolt release pond. This raised questions about homing bias since the smolt release pond is at the head of the fish ladder in the hatchery. Spring 2001 returns which were from age 3 and age 4 fish, however, were very different favoring fish stocked at the down-river sites (estuary and boat). While returns from the first two years of monitoring offer different and confusing results, we have several more years of returns to monitor. We also learned that we can smolt steelhead in the hatchery, stock them in down river sites, and get good numbers to return to the hatchery. This also suggests that the homing bias suspected in the 2000 returns is not a problem.

Pacific Salmon Biological Monitoring
Fall monitoring of Pacific salmon growth at Salmon River Hatchery revealed reduced growth of chinook and coho salmon in 2001. Weights at age were, however, within the range of those encountered in previous years. While the adult (age 2 and older) alewife population was in the best shape it has been in since the early 1990s, there was a very low abundance of yearling alewives in Lake Ontario in 2001 and that may have been a factor which contributed to the reduced growth seen in the salmon. Future prospects for chinook salmon are positive. Jack (age 1 male) chinooks returning to the hatchery are a good indicator of year class strength. The 2000 year class returned 2,393 jacks to the hatchery in 2001. The only cohorts to have more jacks return to the hatchery were the 1999 (3,196 returns) and the 1996 (2,806 returns).

A creel survey was conducted on the Salmon River for steelhead fishermen during the fall of 2001. This was the 5th year for the survey which has occurred annually since 1997. Anglers fished an estimated 12,500 angler days from the middle of October through the last weekend in November. This was the highest level of effort recorded since the survey began. The catch rate was 0.041 steelhead/angler hour which was intermediate among years sampled. The catch was estimated at 3,660 steelhead and the estimated harvest for the time period sampled was 746. As in previous years, nonresidents comprise about 2/3 of the angler effort.

Oswego Walleye Diary Cooperator Program
A small angler diary program for walleye in the Oswego area of Lake Ontario was conducted for a 4th year in 2001. As in previous years, the average size of walleye caught was very large (27.8"). The catch rate was 0.22 walleye/angler hour. Age frequencies of the catches in 2000 and 2001 revealed that these large fish were coming from several year classes with good numbers of fish as old as age 17 represented in the catch. In 2001, we even had one fish that was 23 years old that was hatched in 1978. The age structures of the catches suggest that, despite the fact that these are very large fish, angler exploitation on the population is light. Because of the lack of small fish in the catch, the real question is where these fish are coming from. One potential source of fish is the Bay of Quinte on the Ontario side of Lake Ontario. Recruitment of fish from there has declined dramatically in the recent years because of colonization of the Bay by zebra mussels and reduction in phosphorus inputs which led to increased water clarity and poor walleye recruitment. The Oswego River system including Oneida Lake is another potential source of fish. In any event, we plan to continue monitoring this fishery and the age structure of the catch.

Region 8

Pen Rearing
The chinook pen rearing partnership between the NYSDEC and various Charter Boat Associations completed its fourth successful year during 2001. Region 8 continued to work with volunteers at four sites. Regional sites included Sodus Bay - 50,000 chinook; Genesee River - 50,000 chinook; Sandy Creek - 25,000 chinook and 5,000 steelhead; and Oak Orchard Creek - 75,000 chinook and 10,000 steelhead. As part of the overall study, fish were clipped and stocked in alternating years between Oak Orchard Creek (1999 and 2001) and the Lower Niagara River (2000 and 2002). A multi-year creel survey was started in 2001 on both Oak Orchard Creek and the Lower Niagara River. The first year of data yielded inconclusive results. Chinook salmon raised at the Salmon River Hatchery and stocked directly into the Lower Niagara River in 2000 returned as age 1 (males) in significantly higher numbers versus Salmon River Hatchery chinook that were pen-reared at the Lower Niagara River or chinook that were raised at the Caledonia Hatchery and stocked directly into the Lower Niagara River. However, returns from Oak Orchard Creek yielded much different results. Chinook salmon raised at the Salmon River Hatchery and stocked directly into Oak Orchard Creek in 1999 returned as age 2 (males and females) in

significantly lower numbers versus Salmon River Hatchery chinook that were pen-reared at Oak Orchard Creek or chinook that were raised at the Caledonia Hatchery and stocked directly into Oak Orchard Creek. There was no significant difference in the number of chinook that strayed from their stocked streams. The creel survey will continued in 2002. Detailed reports on the on pen-rearing aspect and creel survey can be found in the NYSDEC's Bureau of Fisheries Lake Ontario Unit and St. Lawrence River Unit to the Great Lakes Fishery Commission's Lake Ontario Committee - 2001 Annual Report.

Status of Smallmouth Bass in the Central Basin of Lake Ontario

Working in conjunction with the Lake Ontario Fisheries Unit, Region 8 staff performed a gill netting operation in the Central Basin of Lake Ontario, off Pultneyville, just west of Sodus Bay from August 13 to August 15, 2001. Like 2000, the purpose of the netting was two fold: to compare the relative density of smallmouth bass in the Central Basin versus the eastern basin; and, to collect a sample of bass for analysis of various toxins to formulate a baseline before the round goby arrives in the area. It is theorized that the presence of the round goby will provide a more direct pathway for toxins to enter smallmouth bass.

The three most frequently caught species remained the same in 2001 versus 2000 at both sites, with two of the species appearing at both sites (Central Basin - smallmouth bass, rock bass and yellow perch) (Eastern Basin - smallmouth, yellow perch and walleye). Catch-per-unit-effort (CPUE), denoted as fish per lift, from the central basin was dramatically larger for smallmouth (86.3 vs 3.0), yellow perch (23.2 vs 6.4) and rock bass (19.2 vs 1.5). Central Basin smallmouth bass CPUE increased from 2000 to 2001 (78.9 to 86.3 bass per lift). A detailed report can be found in the NYSDEC's Bureau of Fisheries Lake Ontario Unit and St. Lawrence River Unit to the Great Lakes Fishery Commission's Lake Ontario Committee - 2001 Annual Report.

Region 9

Trout and Salmon Pen-Rearing Project

The third year of the Niagara River Anglers Association (NRAA) cooperative pen-rearing project took place in 2001. NRAA volunteer workers took delivery of 75,000 pre-smolt chinook salmon and 10,000 pre-smolt steelhead in late April. They successfully reared and released the fish in late May into the lower Niagara River. The purpose of the pen-rearing project is to improve imprinting and survival of anadromous chinook salmon and steelhead to enhance the sportfishery in the lower Niagara River. A more detailed description of the NRAA lower Niagara River pen project, as well as five other pen projects along the New York portion of the Lake Ontario shoreline, is contained in Wilkinson, Pearsall and Bishop 2002.

2001 Evaluation of Pen-Reared Chinook Salmon in the Lower Niagara River

2001 was the first year for evaluating results of the chinook salmon pen-rearing project on the lower Niagara River. (Fin-clipped chinooks stocked in 2000 were expected to return as jacks (precocious males) in fall 2001.) As part of the evaluation effort, creel survey workers collected over 1100 chinook salmon from the fish cleaning station at Lewiston and shore fishing facilities along the lower Niagara River during September and October. Results indicated that jack (age 1) salmon returns to the lower Niagara River were best for Salmon River Hatchery-direct stocked fish, intermediate for Salmon River Hatchery-pen-reared fish and poorest for Caledonia Hatchery-direct stocked chinooks. Direct-stocked Salmon River Hatchery chinooks were observed at approximately twice the frequency of pen-reared Salmon River Hatchery chinooks, and results were statistically significant (p# 0.01). Interestingly, none of the marked salmon from the lower Niagara River were observed at the Salmon River Hatchery during fall 2001 egg collections, suggesting that straying to Salmon River was very limited. In summary, first year results from the pen project are not yet definitive, and it is still early in the evaluation process. More detail regarding the evaluation portion of the pen project can be found in Bishop, Pearsall and Wilkinson, 2002.

Lake Ontario Unit

Lake Ontario Fishing Boat Census

The Lake Ontario fishing boat census provides trend through time data on angling effort and success, and performance of stocked salmonids. While the census targets the open water salmonid fishery, valuable data on other fish species are also collected. The 2001 angling season marked the seventeenth consecutive year (1985-2001) that the census was conducted. Methodology has changed little over the

history the census, with sampling covering boat access channels along 190 miles of New York's Lake Ontario shoreline for the period April 1 to September 30 each year.

Fishing effort has remained relatively constant over the past five years (estimated at 100,038 fishing boat trips in 2001), but is approximately ½ of that observed at its peak in 1990. Anglers targeting trout and salmon accounted for 63,710 fishing boat trips, or 63.7% of the April-September 2001 total. This estimate represents the second lowest trout and salmon effort observed in the history of the census. Anglers targeting smallmouth bass from opening day (June 16) through the end of September accounted for a record-high 31,035 fishing boat trips, or 31% of the April-September 2001 total.

Changes in fishing effort were in part responsible for changes in numbers of fish harvested. Total trout and salmon harvested in April-September 2001 was estimated at 83,241 fish, a 7.3% increase over the record low harvest observed in 2000. Brown trout was the most commonly harvested salmonid in 2001 (25,475 fish), comprising 30.6% of the total, with chinook salmon a close second (25,097), comprising 30.1% of the total. In contrast to trout and salmon, effort targeted at smallmouth bass has generally increased over the years censused, along with harvest. Smallmouth bass harvest in June-September 2001 was estimated at 62,735 fish, a 16.3% decrease compared to 2000. Catch rate among anglers seeking smallmouth bass in 2001 during the open season was 12.3 bass per boat trip, the third highest catch rate among years censused.

Trout and salmon fishing quality, as measured by harvest rates, increased 9.4% from 2000 to 1.3 fish per boat trip, the fourth lowest April-September harvest rate since 1985. Comparisons by species show that April-September 2001 harvest rates were above their respective 1996-2000 April-September averages for brown trout (+3.5%) and coho salmon (+3.1%), and below their respective 1996-2000 April-September averages for coho salmon (-1.5%), chinook salmon (-6.3%), lake trout (-4.1%), rainbow trout (-32.9%) and Atlantic salmon (-23.7%).

Eastern Lake Ontario Warm Water Fisheries Assessment

Assessment of trends in the warm water fish community of the New York waters of Lake Ontario's eastern outlet basin has been conducted annually since 1976 using a standardized gill net sampling program. During this period, the warm water fish community has undergone significant changes, declining from a high of approximately 200-250 fish per net gang in 1976-79, to a record low 15.73 fish per net gang in 2001. The majority of the fish species that were abundant at the start of the assessment program have all experienced significant declines in abundance.

Yellow perch, rock bass, white perch, gizzard shad, and alewife, were all important members of the warm water community in 1976-79, and have all shown a pattern of declining abundance over the 25-year sampling period. Yellow perch and rock bass continue to be important components of the warm water catch (typically the second and third most abundant species), while white perch, gizzard shad, and alewife catches have dropped to very low levels. Catches of northern pike have also shown a significant decline over the sampling period, but were never a major component of the warm water catch in the eastern basin. Other species such as white sucker, channel catfish, brown bullhead, pumpkinseed, freshwater drum, common carp, and silver redhorse, have remained relatively common in the catches, and although average abundance has declined slightly in recent years, long-term trends are not readily apparent. Walleye is the only relatively common species that has shown a long-term increase in abundance, but average catches have also declined for this species since 1993.

Smallmouth bass have always been an important component of the Lake Ontario warm water community , and through 1985 were typically third in abundance behind white perch and yellow perch. By 1988, smallmouth bass emerged as the most commonly captured species in the assessment netting, a position they have since maintained with the exception of 1996, 2000, and 2001 when more yellow perch were collected. Smallmouth bass have shown a cyclic pattern of abundance with two obvious high and low periods. Unfortunately, the last seven years (1995-2001) have been one of the two documented low periods. Smallmouth bass catch decreased in 2001 to a record low 2.99 fish per net gang. A three year moving average catch per net gang, a method often used to help dampen fluctuations due to yearly sample variations, illustrates the current low period to be lower than that experienced in the mid 80's. There is a growing body of data that implicate predation on smallmouth

bass by double-crested cormorants as the primary cause for the decline in smallmouth bass abundance in the Eastern Basin of Lake Ontario.

Impacts of Double-crested Cormorant Predation on Smallmouth Bass and Yellow Perch

Diet studies of double-crested cormorants (DCC) from Little Galloo Island in the Eastern Basin of Lake Ontario have been conducted each year since 1992. In 1999 these studies were expanded to include two DCC colonies in the Canadian waters of the Eastern Basin, Pigeon and Snake Islands. In 2001, smallmouth bass and yellow perch predation by DCC's from the three colonies combined totaled 1.07 million and 8.65 million fish, respectively.

Data on smallmouth bass fishing in Lake Ontario collected from the 1985-2001 fishing boat censuses were analyzed in more detail as part of the evaluation of the impacts of DCC predation. From 1985-90, harvest rates were nearly equal to or greater than the lake-wide average harvest rates and averaged 1.16 smallmouth bass harvested/angler hour. From 1991-2001, harvest rates at Henderson Harbor, adjacent to the Little Gallo Island cormorant colony, were all below the lake-wide average. The Henderson Harbor site continues to be the only localized bass fishery that has experienced a decline in harvest rate.

To further assess geographic differences in Lake Ontario smallmouth bass abundance, the Eastern Basin index gill netting program was expanded in 2000 and 2001 to include sites at Pultneyville. These data were compared to those collected at both sites using the same sampling protocol from 1976 to 1979. The study was prompted by claims that the decline in Eastern Basin smallmouth bass abundance is largely attributable to reduced nutrients, colonization by Dreissenid mussels, and angler exploitation. While smallmouth bass habitat is considered less desirable at Pultneyville relative to the Eastern Basin, all of the aforementioned Eastern Basin conditions exist there, however, Pultneyville lacks a concentration of double-crested cormorants. The study demonstrated conclusively that while smallmouth bass and yellow perch were substantially more abundant in the Eastern Basin when compared to Pultneyville during the period 1976-1979, the opposite was true during 2000-2001. Smallmouth bass and yellow perch abundance at Pultneyville increased between the two time periods 438% and 478%, respectively. The same comparison in the Eastern Basin revealed an 86% reduction in both smallmouth bass and yellow perch abundance.

Lake Ontario Forage Fish Abundance

The U.S. Geological Survey and the NYSDEC have cooperatively assessed Lake Ontario prey fishes each year since 1978 through bottom trawling during spring, summer, and fall along twelve transects distributed across the New York shoreline of the lake. In 2001, adult (age-2 and older) alewife abundance increased to its highest level since 1993 due to recruitment of the relatively strong 1998 and 1999 year classes. Catches of age-1 alewife in 2001 suggest that the 2000 year class is one of the smallest observed, and therefore adult abundance is not expected to increase in 2001. Numbers of age-1 and older rainbow smelt were greater than in 2000, however, biomass was barely above the record low observed in 2000. No deepwater sculpins were caught in 2001.

Lake Ontario Lake Trout Restoration

Lake Ontario Juvenile Lake Trout Assessment

Catches of age-2 and age-3 hatchery origin lake trout during trawl and gill net surveys in New York waters declined to an all time low during the period from 1996 to 1998 (1993 to 1996 year classes). Catch of age-2 lake trout rebounded to 1992 levels in 1999, but fell again to a record-low level in 2000 (1998 year-class). Catches of age-2 lake trout in 2001 (1999 year class) rebounded to just below the level observed in 1997. Trends in numbers of age-2 lake trout caught in trawls and age-3 fish caught in gill nets for the 1975 to 1995 year classes suggested that recruitment of hatchery fish to the population was governed by survival during their first year after stocking. Subsequent to the 1995 year class, this relationship has deteriorated, suggesting increased mortality of stocked lake trout during their second year in the Lake.

Lake Ontario Adult Lake Trout Abundance

A total of 767 lake trout were captured in the September gill net survey in 2001. Catch rates for mature lake trout remained remarkably stable from 1986 to 1998. The catch per unit of effort (CPUE) of mature fish, however, declined by 30% between 1998 and 1999. Poor survival of hatchery fish was likely responsible for declining abundance of immature lake trout since 1989 and current declines in adult numbers. The CPUE's for mature lake trout

in 2000 and 2001 were similar to 1999, at 31% and 38%, respectively, below the 1986-98 average.

Lake Ontario Sea Lamprey Wounding Rate Index
Overall wounding rates remain much lower than pre-1985 levels, but have been above the planned target level of 2 wounds per 100 fish for four of the last five years. The length of A1 marked fish in 2001 ranged from 605 to 847 mm (mean = 737 mm, n = 17). Numbers of lampreys observed attached to fish caught by boat anglers participating in the boat census also increased markedly in 2001.

Survival of Adult Lake Trout in Lake Ontario
Survival of Seneca strain lake trout has been about 30% to 50 % greater than that of Superior strain for the 1984-1991 year-classes. Lower survival of Superior vs. Seneca strain lake trout was likely due to higher susceptibility to and mortality from sea lampreys. Survival of Lewis Lake strain lake trout in Lake Ontario, calculated for the first time in 2000, was poor (44%) and similar to survival of Superior strain cohorts from stockings in the late 1970's. Assuming constant recruitment, average age of mature females is an auxiliary measure of lake trout survival; as survival improves, a greater number of older females accumulate in the population. Average age of mature female lake trout has been increasing steadily since the mid 1980's. The average age of 9.55 years in 2001 reflects a population comprised of the oldest group of mature females since the rehabilitation program was initiated.

Natural Reproduction of Lake Trout in Lake Ontario
In 2001, a total of 30 naturally produced lake trout (28 to 420 mm total length) were caught with bottom trawls. Survival of naturally produced lake trout to the fingerling stage in summer and fall occurred each year during 1993–2001. Further, survival to older ages has also been apparent. Based on length-frequency, lake trout from all year-classes since 1993 have been observed in catches through 1998. In 1999 and 2000, lake trout from 3 cohorts (age-0 to age-2) were represented in the catch. In 2001, lake trout from four cohorts were collected. This modest level of reproductive success, nine successive year classes produced from the first eight year classes surviving to age-1, is an important early sign of successful natural reproduction and meets the plan objective to demonstrate the feasibility of lake trout rehabilitation in Lake Ontario.

Annual Angler Harvest of Lake Ontario Lake Trout
The estimated annual harvest of lake trout from U.S. waters of Lake Ontario since the slot limit (635 - 762 mm) was re-instated in 1992 has been more than four times lower than previous years when no size limits were in effect. Harvest reached its lowest level in 2000 with an estimated 7,319 lake trout creeled, and increased to 9,866 fish in 2001. Lake trout harvest rate in 2000 (0.113 lake trout per boat trip) was also the lowest recorded, and increased slightly in 2001 (0.155 lake trout per boat trip). The percentage of trophy-size (> 762mm or >30 in) lake trout harvested by anglers, remained near 25% from 1997-2000, and increased to 44% in 2001.

Lake Ontario Commercial Fishery
Commercial fishing activity in the New York waters of Lake Ontario is limited to the embayments and nearshore open waters of the eastern end of the lake. Commercial fishing gear includes gill nets, trap nets, and fyke nets. Commercial harvest is generally targeted at the following species (in decreasing order of abundance): yellow perch (*Perca flavescens*), brown bullhead (*Ameiurus nebulosus*), sunfish (*Lepomis* sp.), white perch (*Morone americana*), rock bass (*Ambloplites rupestris*), and black crappie (*Pomoxis nigromaculatus*). In 2001, six active fishers reported 46,671 pounds of fish caught with an estimated total value of $80,203. The commercial catch was dominated by yellow perch (40,323 pounds, $70,565).

Lake Erie and Tributaries

Lake Erie Unit

Juvenile Warmwater Fish Assessment
This current trawling program is conducted during October at randomly selected stations between the 15- and 30-m depth contours in New York's portion of Lake Erie. Standard tow duration is 10 minutes.

In 2001, abundance measures for 8 of the 12 commonly encountered species increased from the previous 9-year mean catch rate. The most abundant species encountered in this program was YOY rainbow smelt, but several species made large contributions to the 2001 trawl collections, including trout-perch, emerald shiners and round goby. In 2001,YOY white bass catches were an order of magnitude higher than any previous

observation. The previous high value for white bass abundance was observed only two years previously, and three of the four highest indices in the white bass time series have been observed in the last three years.

The 2001 mean density estimates for YOY, yearling and adult yellow perch were all above the previous overall 9-year mean density values for these life stages of yellow perch. The YOY index for yellow perch was especially high, ranking close to the other highest values observed in the time series. The mean length of age-0 yellow perch in 2001 was very near the long-term value in the data series. However, age-1 yellow perch in 2001 were 18 mm (0.7 in) longer than average for the last 9 years.

Warmwater Fish Stock Assessment

This annual, autumn gill netting survey has been ongoing since 1981. Four to six 213 m graded mesh nets are set each day, with 40 sites sampled in 2001.

The overall abundance index for walleye in 2001 was below the long-term average abundance since 1981. The age composition of this walleye sample was comprised principally of younger (< age-3) cohorts. This gill net assessment has had a juvenile walleye emphasis since its inception, with age-1 and age-2 walleyes comprising a large fraction of the total walleye sample each year. Yearling walleye catch rates ranked the 2000 year class very weak, relative to the entire time series. Age-2 walleye mean length in 2001 was tied for the largest value observed over the entire 21-year time series at 441 mm (17.4 in). This 2001 walleye sample only comprised 10 age-2 individuals, nevertheless, it continued a trend of increased age-2 length-at-age observed since 1999.

Smallmouth bass catch rates in 2001 remained near the highest levels observed for this 21-year time series. Two age groups (age 2 and age 3) made particularly large contributions to this 2001 sample. Conversely, only two age groups between age 0 and age 19 were not represented in the 2001 sample. Although sub-adult (age-2 and age-3) smallmouth bass age groups dominated the 2001 sample, older, adult cohorts also remained well represented in collections during recent years. The long-term recruitment indices for juvenile, age-2 and age-3, smallmouth bass rank the 1998 year class as large and the 1999 year class as perhaps the largest yet observed in our 21-year time series. These age-2 and age-3 cohorts averaged 272 mm and 344 mm total length, respectively, in this fall 2001 gill net collection. Both age groups were longer than average for the time series. The age-3 bass in 2001 were the longest ever observed in the entire 21-year time series, exceeding previous highs established in 2000 and 1999, respectively. Mean length-at-age of age-3 smallmouth bass has had an increasing trend since 1997.

In the 15- to 30-m stratum, yellow perch maintained markedly higher abundance levels first observed in 2000. This deeper 15- to 30-m stratum has only been sampled since the interagency index fishing protocol was fully implemented in New York, beginning in 1993. Yellow perch are not effectively sampled at the shallower (0 to15 m), long-term gill net sites. Age-3 and age-5 yellow perch were the most abundant age group in the 2001 collections. These age groups, representing the 1998 and 1996 year classes, together comprised 72 percent of the yellow perch sampled in this gill net assessment. Only since 2000 have adult cohorts of yellow perch contributed measurably to this annual sample.

Of the remaining commonly encountered species in this 2001 gill net sample, only channel catfish were caught in higher abundance than the long-term mean catch rate. White sucker catch rates have undergone a gradual, long-term decline and remained near a low ebb in 2001. Three other infrequently encountered benthic fish species in previous years, quillback carp sucker, stonecat, and common carp, were not encountered in 2001. White perch and white bass catch rates declined sharply between the 1980's and 1990's. Freshwater drum were a species of particular concern in 2001 due to observations of extensive fish kills during late summer. This September gill net assessment largely occurred after the observed drum die-offs. The 2001 abundance index for drum was below the long-term (1981-2000) average measured in the shallow stratum (< 15m), but remained slightly above the long-term (1993-2000) average catch rate for the deeper (15-30 m) stratum. Drum catch rates were found to be characteristically higher in the deeper survey stratum every year that both shallow and deep sampling areas have been monitored since 1993.

Walleye Tagging Study

During the 12 years New York has participated in this interagency tagging study, 14,912 walleyes have been tagged in the New York portion of Lake Erie.

During April 2001, 989 walleyes were collected in New York waters and affixed with jaw tags as a continuation of this effort to examine walleye distribution and exploitation rates. Two tagging sites sampled in 2001 were Van Buren Bay and the Lackawanna shoreline. Walleyes tagged for this study were collected by trap nets and boat shocker.

Since the inception of this tagging study, 1,273 tag recoveries originating from the New York tagging effort have been reported by anglers and the Ontario commercial fishery. Seventy-six (76) of these recaptures occurred during 2001.

Over the duration of this 12-year assessment, first-year tag recovery rates ranged between 1.1 and 4.5 percent. We have expanded these observed recovery rates to exploitation rates using a multiplier of 2.46 for non-reporting of recovered tags. The mean exploitation rate for tagged walleye from 1992 to 2001 was estimated as 6.25 percent.

Although these estimates derived from tagging data are bound by broad confidence limits, they remain consistent with other data that are characteristic of a walleye population with low adult mortality.

Lake Trout Assessment

This standard August gill net assessment has been employed to assess lake trout populations for the New York waters of Lake Erie since 1985. Approximately 60 sets of 152 m graded mesh nets are set annually in coldwater habitat.

Total unbiased gill net assessment (all gear types) of the lake trout population residing in New York's portion of Lake Erie in 2001 sampled 249 individuals, an increase of 115 fish (86%) over the 2000 survey. Longevity continues to increase with 17 year classes, from age 1 to age 17, represented in the sample of 215 known-aged fish. Young fish (ages 2, 3, and 4) were the most abundant cohorts, representing 43% of the total catch. Older fish (age 10+) were also well represented (33%) in the population. Of note was the high ratio of males to females (9:5) found in the older (age 10+) cohorts. Maturity rates were consistent with recent years, where males are 100% mature by age 4 and females by age 5. Mean lengths-at-age and mean weights-at-age of sampled lake trout did not deviate from long-term averages. Long-term averages from three time periods (1986-1990, 1991-1995, 1996-2000) indicate that lake trout growth has been consistent to slightly increasing since sampling began in 1985, with the majority of growth in length in Lake Erie lake trout occurring by age 10, and fish reaching around 800 mm total length and weighing 6,000 g. The largest lake trout sampled measured 953 mm and weighed 10.36 kg (37.5 inches, 22.6 lbs). This was the largest specimen yet recorded from the Lake Erie lake trout gill net survey. Fifty-seven mature females were sampled in New York waters of Lake Erie in 2001. Fifty of these fish contained either fin clips or coded-wire tags and could be assigned ages. These fish ranged from age 4 to 17 and generated a mean age of mature females captured in our sampling of 9.3 years. This marks the fourth consecutive year that mature female lake trout in Lake Erie have met or exceeded the target mean age, established in the Strategic Plan, of at least 7.5 years.

The relative index of abundance for age-5-and-older lake trout rebounded slightly in 2001, but was still low compared to indices of the early and mid-1990's. The 2001 index of 1.18 fish/lift was the second lowest index recorded (lowest in 2000) since the rapid build-up of the adult population due to improved survival, following initial sea lamprey treatments in 1986-1987. The age 1-3 relative abundance index continued to increase in 2001 to the highest level since 1992.

Annual survival was estimated at 0.83 ($Z = -0.19$) for fish age 3-17, based upon standard assessment catches corrected for stocking. Catch curve estimates of annual survival have met or exceeded the Strategic Plan's target of >59% since 1993.

One advantage of implanting coded-wire tags (CWT's) in lake trout before stocking is being able to determine the age and stocking strain when the fish are recaptured. Of the 215 lake trout aged in 2001, six strains were found to comprise the Lake Erie stocks. Finger Lakes (FL) and Superior (SUP) strains were the most prevalent, but are also the most stocked strains. Substantial contributions were also made by Lewis Lake (LL) and Lake Ontario (LO) strains.

More interesting is the contribution of strain by age. Finger Lakes strain lake trout have been stocked in Lake Erie since 1985. With the exception of ages 1, 2, and 15, and ages when not stocked (1993 (age 9) and 1999 (age 3)), lake trout from every year this

strain was stocked were present in 2001 catches. The majority of lake trout older than age 11 and all 14, 16, and 17-year-old fish were Finger Lakes strain as well. Superior strain, conversely, have been stocked from 1980-1991 and 1997-2001, but 72 of the 73 returns were from recently stocked fish (ages 1-4). The one older return was from the 1987 (age 15) stocking. The Lewis Lake strain, which is the last of the strains that are currently stocked, has had good returns from fish stocked from 1992-1994 and 1996-2000. No fish, however, were present from the 1987-1988 stockings. Of the remaining strains no longer stocked, good returns are still occurring from both the Lake Ontario strain stocked from 1989-1993 and the Lake Erie strain (1993-1996). A few fish from a Finger Lakes/Superior cross have also survived well.

Analysis of the stomach contents of lake trout and burbot revealed a diet of about 90% fish in both species. Whitefish diets consisted entirely of invertebrates, with quagga and zebra mussels (62%), chironomids (15.2%), and cladocerans (20.3%) making up the bulk of the diet. Of the fish species consumed by lake trout and burbot, 99% and 70% , respectively, were smelt. Round gobies were a significant portion of the diet for burbot (22%), but were absent in lake trout stomachs.

Sea Lamprey Assessment

Observed fresh wounding (A1-A3) on lake trout greater than 532 mm total length was 20.3 wounds per 100 fish in 2001, the second highest rate since 1987. This exceeded the target rate of 5 wounds per 100 fish for the sixth consecutive year. Most (78.6%) of the fresh lake trout wounds (A1-A3) occurred in fish greater than 734 mm. Some fresh wounds did appear in the 533-633 mm and 634-734 mm categories, however. No wounds were found on lake trout from 432-532 mm in length.

Fresh wounds (A1) are considered indicators of the attack rate for the current year at time of sampling (August). The 2001 observed rate of 0.029 wounds per lake trout greater than 532 mm total length was virtually identical to the 2000 rates and still higher than rates for the period 1988-1996. All fresh A1 wounds occurred in lake trout greater than 734 mm.

A4 wounds, which indicate the past year's cumulative attacks, were higher than 2000 rates, but were still lower than the rates observed in 1997-1999. The observed 2001 attack rate was 18.8 wounds per 100 fish for lake trout greater than 532 mm. No A4 wounds were found on lake trout less than 634 mm.

The overall index for sea lamprey nesting in 2001 was 6.0 nests/km, which was down approximately 50% from 1999 and 2000 survey results. The majority of the nests were found in the main branch of Clear Creek, which had a nesting rate of 8.8/km. These results continue the trend in Clear Creek of declining nests since 1997. Only a few nests were found in Canadaway Creek and Delaware Creek. Surprisingly, no lamprey nests were found in North Branch Clear Creek, which had a nesting rate of 16.3 nests/km last year and 53.8 and 47.5 nests/km in 1997 and 1998, respectively. Nest counts in the Lake Erie tributaries are expected to decline after lampricide treatments in both 1999 and 2001 in the Cattaraugus Creek watershed.

Wild Steelhead Assessment

Electrofishing has been used to sample wild steelhead in Cattaraugus Creek tributaries since 1995. In 2001, Chautauqua Creek and Little Chautauqua Creek were also sampled.

1) Spooner Creek (E.23-30)

Ten sampling stations, ranging from 100 to 134m in length, were sampled between September 10 and October 10, 2001, on Spooner Creek. Total area sampled encompassed 0.42 hectares of surface water and over 20% of the stream length (1,182 m). Total available trout habitat from Route 39 upstream to Trevitt Road (5.77 km) was approximately 1.85 hectare of surface area.

Altogether, 3,597 rainbow trout were sampled on Spooner Creek in 2001. The majority (3,117) of the fish were young-of-year (YOY), ranging from 40 to 85mm in length and averaging 62mm. A substantial number of age-1-and-older fish were also sampled, with the largest being 265mm (10.3").

The 2001 YOY density estimate of 8,019 wild fish per hectare and the population estimate of 14,853 (2 sd = $\pm$ 261) were the highest estimates of fish recorded since sampling on this tributary began in 1995. Population estimates of 2,052 fish and densities of 1,108 fish/ha were obtained for age-1-and-older trout.

Mean total length of wild YOY steelhead collected in Spooner creek in 2001 were significantly

($P<0.05$) smaller than all previous samples, with the exception of 1995. One of the more interesting aspects of the survey was the difference between the upper half of the stream, which flows through the woods and contains 50-75% tree canopy, and the lower portion, which is non-forested and has virtually no overhead canopy. Water temperatures in the upper portion ranged from 10° to 15° C during the summer, while lower portion water temperatures ranged between 17° and 25° C. Trout densities were corresponding, with upper sampling station populations of 14,645 trout/ha, over 3 times higher than lower sampling stations (4,621 trout/ha).

2) Chautauqua Creek (E.68)

Low numbers of YOY steelhead were found during scouting of Chautauqua Creek on October 4, 2001. The section sampled was just upstream of the village of Westfield. Overall, recruitment potential and spawning habitat was gauged to be low. However, the fact that any fish survived following the drought conditions present during the summer months was promising.

3) Little Chautauqua Creek (E.68-1)

Little Chautauqua Creek was spot-sampled on October 4, 2001 from the mouth up to a natural rock barrier approximately 0.75 km upstream. Recruitment potential was judged to be high, with hundreds of YOY and age 1+ trout found. The habitat was considered excellent with a variety of riffles, pools, logs, gravel, and a full tree canopy. Unfortunately, the natural barrier prevents further passage upstream and limits the potential for significant natural reproduction.

Sport Fishery Assessment

Since 1988, a direct contact sport fishing survey has been conducted to monitor the open water fishery. This standard, annual program extends from May through October along the entire New York portion of Lake Erie.

Overall 2001 open water sport fishing effort in New York waters of Lake Erie was estimated as 438,653 angler-hours. Overall fishing effort estimates during the last 3 years (1999 to 2001) remain very similar and rank as the three lowest annual totals of the 14-year time series. During the 2001 fishing season, walleye angling was the largest component of the boat fishery. Bass angling ranked second in boat fishing effort on New York's portion of Lake Erie. Among the remaining effort, targeted yellow perch effort experienced a sharp increase in 2001.

During 2001, the springtime boat fishing effort (1st Saturday in May to 3rd Saturday in June) was comprised mostly of bass anglers. The recent springtime expansion of bass angling effort now seems to have stabilized between 40,000 and 60,000 angler hours.

The total estimated daytime walleye harvest was 14,669 fish, ranking 2001 as producing the second lowest walleye harvest in the 14-year survey. Walleye fishing effort totals during each of the last 3 years have remained low, relative to the entire 14-year time series. The 2001 walleye effort total of 163,144 angler-hours was the lowest annual estimate observed in the entire time series. In addition, walleye total catch and harvest estimates have remained very similar in 2001, suggesting nearly all the walleyes boated in the sport fishery were creeled. The 2001 walleye sport fishery was centered in offshore waters between Silver Creek and Sturgeon Point, New York; areas west of Dunkirk produced a markedly lower harvest of walleyes. The overall targeted walleye catch rate during the 2001 fishing season was 0.09 per hour, which ranks this walleye fishing season with markedly lower catch rates, relative to most other years in the survey. The average total length of harvested walleyes in 2001 was 612 mm (24.1 inches).

Smallmouth bass harvest was estimated as 9,832 fish, which ranks 2001 with the lowest bass harvest for the entire 14-year survey. The overall 2001 bass fishing effort also declined to the lowest total observed during the period that expanded spring bass fishing opportunities have existed, beginning in 1994. The 2001 smallmouth bass harvest also remained very small, relative to the bass catch by boat anglers. Smallmouth bass remained the most frequently caught species (136,695 fish) by boat anglers by a very wide margin. The 2001 overall catch rate by bass anglers was 0.87 bass per hour, and mean length of harvested smallmouth bass was 404 mm (15.9 inches) in 2001.

Yellow perch emerged as the most harvested species (31,877 fish) in the 2001 sport fishery, and fishing effort extended by yellow perch anglers was the highest observed in the last 9 years. The 2001 yellow perch sport harvest was centered in two

relatively localized nearshore areas, one in the vicinity of Dunkirk, and the other area near Silver Creek, New York.. Most other areas produced a markedly lower harvest of yellow perch. The 2001 overall yellow perch catch rate increased to 1.75 perch per hour and was similar to the highest values in the time series observed during the late-1980's. The mean length of harvested yellow perch was 251 mm (9.9 inches) in 2001.

Forage Fish Assessment

A new initiative that began in 1999 as an element of forage assessment, and has since continued as an ongoing program, is an interagency lower food web monitoring program coordinated through the Lake Erie Committee's Forage Task Group. Initial sampling was accomplished, in conjunction with a Cornell-led research project. However, subsequent annual monitoring has become the ongoing responsibility of the Lake Erie Unit, and an annual lakewide summary of this effort appears in the Forage Task Group's annual report to the Lake Erie Committee.

Beginning in 1993, a mid-summer fisheries acoustic survey was implemented to provide a more comprehensive evaluation of the distribution and abundance of rainbow smelt. This initiative was implemented under the auspices of the Lake Erie Committee's Forage Task Group and was led by the New York State Department of Environmental Conservation, with collaboration by the other Lake Erie Committee member agencies and Cornell University's Warmwater Fisheries Unit. This survey has been an ongoing, annual summertime initiative that represents one of eastern Lake Erie's best examples of interagency cooperation in fisheries assessment. Ontario and New York research vessels partner in data collection, and biologists from Ontario, New York and Pennsylvania collaborate in analysis and reporting of data. The 2001 survey found a pattern of pelagic fish abundance similar to previous efforts. This pattern finds pelagic fish densities concentrated near the thermocline, particularly in locations where the thermocline was in close proximity to the bottom. The lowest pelagic fish densities most often occurred centrally over the deepest portion of the eastern basin in surveys. Furthermore, a characteristic alternate year-high and low abundance pattern since 1995 is also apparent in yearling-and-older (YAO) rainbow smelt abundance through our time series. The 2001 collections represented the high phase of the alternate year abundance cycle.

Creel and Angler Surveys

Region 1

Angler Diary Program

Region One continued to coordinate angler diary programs for both warmwater and coldwater gamefish in 2001. Diaries were mailed in March and April; return envelopes were mailed in November.

In 2001, One hundred forty-two anglers volunteered to keep warmwater diaries and ninety-eight anglers volunteered to keep coldwater diaries. Of warmwater diary cooperators, 46% returned diaries at the conclusion of the regular season. Forty four percent of the coldwater diary cooperators returned diaries. Coldwater diary cooperators logged 1,226 hours of fishing on 29 waters. A total of 1,973 fish were caught. Warmwater diary cooperators logged 2,973 hours of fishing on 41 waters. A total of 2,360 fish were caught.

One angler diary report was completed in FY 2001-02. The report, summarizing coldwater diary data submitted between 1998 and 2000, was mailed out to all coldwater diary cooperators. Those cooperators who contributed data to the report received their original diaries enclosed with the report. The 2000 Warmwater Diary Report was begun in FY 2001-02 but remains incomplete at this time. Data from the 2001 diary season has been entered and preliminary analysis completed. Also, several improvements were made to the angler diary cooperator database in FY 2001-02 which should result in more time efficient data handling this year.

Region 2

Prospect Park Lake, Brooklyn

The angler survey was conducted between May 5 and November 4, 2001. The survey was conducted every weekend day as well as three assorted weekdays. Two shifts were established and randomly selected to allow for good coverage of morning and evening anglers (7 a.m.-4 p.m. & 11 a.m.-8 p.m.). During each shift three count runs were made. First, the survey clerk circumnavigated the lake first to get a count of the number of anglers. Second the survey clerk interviewed individual anglers about their knowledge of the regulations and the status of their catch.

Julie McPherson and Cheang Taing, our creel clerks, combined to complete 1,357 survey interviews. Besides the catch data we also assessed anglers understanding of the park's special concerns. The following five questions where asked because they are important to the management of the lake:

1) Are you aware that the Parks Department has a No-Kill policy (catch and release fishing only)? 66% answered yes.
2) Are you aware that the Park stocked pickerel in the lake last fall? 47 % answered yes.
3) Are you aware that lead weights are not allowed to be used while fishing in City Parks? 46 % answered yes.
4) Are you aware that the State requires anglers 16 years of age and older to have a fishing license to fish any freshwater body in NY, including Prospect Park Lake? 54% answered yes.
5) Did you know that improperly disposed of fishing line often kills birds? 61% answered yes.

Overall effort during the study was estimated to be 16,963 hours. Peak catch rates were during the months of May and August, with an overall catch rate of 0.26 largemouth bass per hour**.** Preseason bass fishing was very prevalent.

Region 7

Cayuga Lake Angler Diary Program

Sixty - eight angler diary cooperators logged 1,615 trips on Cayuga Lake in 2001 fishing for trout and salmon. They averaged two legal fish per trip and their catch rate was one legal trout or salmon every 2.7 hours which was the best since 1988. Lake trout were the most abundant fish in the catch with 2120 legal size lakers being caught. Brown trout were the next most abundant fish in the catch. A total of 696 legal browns were caught which was much higher than normal. This high catch rate was due in part to the fact that the Cayuga Lake Charter Captains Association stocked 7500 browns in the lake in the spring of 2000. These fish were approximately 12 inches long when stocked, were two years old, and survived well in the lake. Because of the expense we do not normally stock fish this large. Normally the browns we stock average nine inches long. Fishing for landlocked Atlantic salmon was also good. A

total of 276 legal size landlocks were caught. These fish must be at least 18 inches long to be legal on Cayuga whereas they need only be 15 inches in all other finger lakes. However, Cayuga Lake still provides the best fishing for landlocks in New York State. The catch of rainbow trout was somewhat disappointing in 2001. The oil spill in the fall of 1997 basically destroyed that year class. These fish would have been five years old in 2001. At that age the wild rainbows of Cayuga contribute heavily to the fishery. On the up side this year class will have passed through the fishery in another one to two years and the fishery should rebound to normal.

Otisco Lake Angler Diary Program

Ten angler diary cooperators logged 94 trips on Otisco Lake in 2001. The catch rate for walleyes was 0.06 legal fish per hour in 2001 compared with 0.25 in 2000. A catch rate of 0.25 is considered excellent and was the best we had experienced on Otisco Lake since stocking began in 1988, first by Onondaga County and followed by DEC. Mean size of walleyes has been declining over the past several years. The population consisted of more old fish in past years. These fish built up in the population because during those years alewives were so abundant that all walleyes were very well fed and difficult to catch. As the population of walleye built up in the mid to late 1990's, we believe the alewife population declined making the walleyes easier to catch. When this occurred, the larger fish were caught off. With an 18" size limit, many of the male fish, which grow slower had to be returned, while the faster growing females were kept. It is also normal for a fish population to be made up of younger individuals as fishing intensity on that population increases.

Owasco Lake Angler Diary Program

Thirty- four cooperators logged 449 trips and caught 887 legal salmonids in 449 trips for an average of 2.0 fish per trip. Legal salmonids were caught at an average rate of one fish every 1.9 hours. Our coldwater lake cooperators were successful in catching at least one legal salmonid in 82 percent of their trips. This was the best percent success since 1966. Coldwater cooperators caught 722 legal lake trout, 65 legal rainbow trout, 96 legal brown trout and four legal landlocked salmon. Catch rates for these species were 1.6, 0.14, 0.21 and .009 legal fish per trip while harvest rates were 0.54, 0.08, 0.13 and 0.007 legal fish per trip, respectively. Lake trout comprised 81 percent of the legal salmonid catch while rainbows, browns and landlocked salmon were seven, 11, and one percent, respectively.

The twelve warmwater cooperators caught 174 legal smallmouth bass, three legal largemouth bass, 31 legal walleye and six legal northern pike in 177 trips for an average of 1.2 legal warmwater gamefish caught each trip. Only 15 smallmouth bass, 26 walleye and one northern pike were kept by our warmwater cooperators. The Owasco Lake Anglers Association has stocked Owasco Lake with walleye fingerlings annually since 1996. These fish are doing very well in the lake as noted by the annual increase in the warmwater cooperator catch. In 1999 cooperators caught two sub-legal walleye. In 2000 six legal and 18 sub-legal walleye were caught. In 2001 warmwater cooperators caught 31 legal and 53 sub-legal walleye.

Skaneateles Lake Angler Diary Program

Thirty-two coldwater diary cooperators logged 537 trips in 2001 and caught 781 legal salmonids for an average of 1.5 fish per trip. Coldwater lake cooperators were successful in catching at least one legal salmonid in 72 percent of their trips. Legal salmonids were caught at an average rate of one fish every 2.2 hours. Cooperators caught 430 legal lake trout, 299 legal rainbow trout, one legal brown trout and 51 legal landlocked salmon. Catch rates for these species were 0.8, 0.56, 0.002 and 0.09 legal fish per trip while harvest rates were 0.6, 0.45, 0.002 and .08 legal fish per trip, respectively. Lake trout comprised 55 percent of the legal salmonid catch while rainbows and landlocked salmon were 38 and seven percent, respectively. The benefits of a recent increase in landlocked salmon stocking were noted in the substantial increase in the number of salmon caught. Participation in the warmwater section of the Skaneateles Lake angler diary program is light with only five cooperators. They caught and released 36 legal smallmouth bass in 27 trips. An additional four sub-legal smallmouth bass were also caught and released.

Region 8

Trout Angler Opinion Survey

To determine angler opinion of a new regulation (5/2 trout regulation) aimed at distributing the harvest of larger trout among more anglers and for a longer duration throughout the fishing season, a newspaper survey of area anglers was conducted in

May 2000. In addition to the new regulation, opinions were sought on current trout management regulations (i.e. no kill, year round season, artificial lures only) and two site specific regulation proposals. A survey in a local newspaper was chosen in an attempt to generate greater response from anglers than typically would attend a public meeting, but would not require the cost and effort of a more traditional survey. Respondents were able to reply on-line at the newspapers website or clip out a copy of the survey from the newspaper and mail it directly to our office. A total of 271 replies were received, 63% on-line and 34% newspaper and 3% other. About 85% of all respondents fished more than six days during the preceding fishing season. Fifty-three percent of all respondents belong to a fishing club. Approximately 73% of respondents supported the proposed trout regulation with club and non-club members supporting the proposal. For questions concerning current trout regulations and specific stream regulation proposals, generally, the average response of respondents who belonged to a fishing club were significantly different from respondents who did not belong to a fishing club. Except for year-round fishing, respondents belonging to fishing clubs generally supported special regulations more than those that did not. The survey was successful in that response was greater and percentage of club and non-club members was more representative of the general angling public than could be obtained from a typical public meeting. Benefits of the survey included increased awareness of trout management, coverage of area streams, and active participation of constituents in regulation formation. These benefits were directly related to the excellent coverage extended by the local newspaper. However, some control over the survey was lost because of inability to proof the story and the spread of the survey outside of the newspaper.

Oatka Creek Creel Census

A creel survey was conducted on Oatka creek from late March through October, 2001. It was conducted as part of the No Kill trout fishing regulation evaluation. The 2001 creel survey was the post-regulation change census. Preliminary data analysis shows in 2001, like the 2000 census, Oatka creek, which has no closed season, follows the general pattern of high fishing pressure from April to July which tapers off through October. Compared to 2000, fewer of the stocked two year old brown trout were harvested within days of stocking in 2001. The 2001 two year old harvest appeared to be more spread out. Full data analysis has yet to determine whether the No Kill regulation induces more angler effort as predicted.

Early Season Bass

There has been a sincere interest from Bass Angling Sportsmen Society (BASS) clubs located in New York State Department of Environmental Conservation's (NYSDEC's) Region 8 regarding a spring catch-and-release bass season. In response to this interest, a trial catch-and-release bass season regulation was implemented in 2001 on selected waters and evaluated. The goal of a springtime catch-and-release season will be to provide additional bass angling opportunities without negatively impacting the quality of bass fishing during the regular open season. The experimental season runs from the first Saturday in May until the third Saturday in June. The affected waters are Conesus, Hemlock, Canadice, Honeoye, Canandaigua, Keuka, and Seneca Lakes.

Realizing the potential for impacts on the bass populations of these waters and the fact that black bass enter the sport fishery at the age of four or five, the NYSDEC Region 8 Fisheries Management Unit has undertaken an eight year study to determine if spring catch-and-release angling can be permitted without adverse impacts to the black bass resource. Surveys of angler opinions and fishing practices were conducted in 1998, 1999, and 2001, and will be repeated in 2003, 2004 and 2005. Since there are often large natural variations in the year class composition of bass populations, a cornerstone of the NYSDEC study is to survey anglers for their attitudes and perceptions on the quality of the bass fishery and to evaluate changes in levels of angler satisfaction that may result from the experimental catch-and-release season.

The NYSDEC will use four indices to measure angler "acceptance " of the regulation change. Specifically, the proportion of Region 8 anglers having a "Good or Excellent" perception of the bass fishery will remain at 55% or higher; anglers' favorable opinions of the early season catch-and-release fishery will remain at 55% or above; the level of early-season near-shore casting will increase from the 1998-99 average of 1038 boat hours to at least 1194 hours (15% increase) over the 5-year period of 2001-2005; and angler diary catch rate of

bass anglers fishing Honeoye Lake in the regular season will be equal to or greater than the 1996-1998 average of 1.05 legal ($12") bass per hour.

In the first post early season survey conducted in 2001, 69% of surveyed anglers felt that the bass fishery was good to excellent. This is well above the established 55% index level. Seventy three percent of the surveyed anglers were in favor of the early season, again well above the established 55% index level. Anglers targeting bass approve of the season at an 84% level. The level of early season casting was calculated to be 1680 hours. NYSDEC staff set a index level of 1194 near-shore casting hours. Final analysis of catch data is not available at the time of this writing.

Seneca Lake Angler Diary Program

Sixty eight volunteers returned diaries during the 2001 season. On average, it took these anglers 1.2 hours to catch a legal salmonid, which is the best catch rate ever recorded since the diary program was initiated in 1973. This excellent catch rate is a reflection of very hungry lake trout that are more willing to strike an angler's lure due to a declining forage base. To reduce the pressure on the forage base and compensate for the added numbers of wild fish, we lowered lake trout stocking rates by 38% to 20,000 yearlings and 40,000 fingerlings in 1999. We also started fin clipping 100% of the stocked lake trout in an effort to accurately estimate lake trout natural reproduction rates. We will be conducting an extensive gill net survey during the summer of 2002 to further evaluate lake trout and forage populations. Future reductions in lake trout stocking rates may be necessary if growth rates continue to decline and wild fish continue to expand.

The rainbow trout population is completely supported by natural reproduction with both the brown trout and landlocked salmon populations completely supported by stocking, which add diversity to the fishery. The number of these three species caught by anglers continues to be low and may also be showing the strain of a declining forage base. For the near term brown trout will be stocked at the current, annual rate of 21,600 yearlings and 43,000 fingerlings. Landlocked salmon are stocked at a rate of 24,000 yearlings annually.

Keuka Lake Angler Diary Program

Fifty one anglers returned diaries for the 2001 season. For the past eight years Keuka Lake angler diary keepers have experienced an excellent catch rate of approximately 2.0 hours to catch a legal salmonid. These excellent catch rates are the result of a very abundant wild lake trout population with a few landlocked salmon, brown trout and rainbow trout included for diversity. Lake trout continue to exhibit good size in recent diary catches, averaging over 21 inches in length and 3.0 pounds in weight. However, once the effects of zebra mussels are fully realized, we expect growth rates to decline in the near future.

The wild lake trout population in Keuka Lake is increasing, placing an additional burden on the declining forage base. To reduce the pressure on the forage base and compensate for the added numbers of wild fish, we may have to reduce the stocking rates for brown trout and Atlantic landlocked salmon. For the near future we plan on continuing the annual stocking of 22,300 landlocked salmon and 9,400 brown trout yearlings. The rainbow trout population is completely dependent on natural recruitment, which occurs mainly in Cold Brook.

Canandaigua Lake Angler Diary

2001 marked the 29th anniversary of the Angler Diary Program on Canandaigua Lake. On average, anglers fished 1.6 hours to boat one legal salmonid. Lake trout continue to be the driving force behind the coldwater fishery representing about 85% of all salmonids caught. Harvested lake trout averaged 20.8 inches and 3.3 pounds, almost identical to the 10-year average (20.8 inches and 3.4 pounds) during the 1990's. We are planning a survey this summer to evaluate the current condition of the lake trout population and will develop management strategies accordingly. Brown and rainbow trout comprised 8 and 7% of the harvested salmonids. Brown trout populations are maintained by annual yearling stockings while rainbow trout are completely self-sustaining spawning in Naples Creek.

Although recent salmonid catch rates have been excellent, they may be a result of a decreasing forage base, hence a hungrier fish more willing to strike bait or a lure. Reports indicate that the smelt population is greatly reduced and alewives are declining. Recent research has indicated that lake productivity has steadily decreased, while water clarity has steadily increased. Zebra mussels and the fishhook water flea are firmly established in the entire lake and are probably contributing to the decline in productivity. These animals are very efficient filter feeders of plankton and may disrupt

the bottom level of the food chain, resulting in fewer and smaller forage fish available for predators (i.e. salmonids) to consume. Decreasing forage abundance could result in poor growth and fish condition of top predators, such as lake trout, and may negatively impact the entire fishery and should be closely monitored.

Region 9

Chautauqua County Small Lakes Creel Survey
An open water (access site/boat) and ice survey was initiated in 1999 at Bear and the Cassadaga lakes to assess the catch, harvest and angler preferences. Anglers were strongly in favor of the slot limit for black bass although the majority were not familiar with the reasons or intent of the regulation. Few bass less than 12 inches were harvested by anglers. Activity by bass anglers has increased measurably in the past two years. Ice angling activity has been light with the majority targeting walleye at Bear Lake. Analysis of data resulting from this survey has been completed with the assistance of Dunkirk Fisheries Station staff and a BOF Type II draft report has been completed and is currently being reviewed by Albany fisheries staff.

Central Office - Inland Section

Beaver Kill Creel Census
Inland staff continued coordination of Region 3, Region 4, Cornell and Trout Unlimited activities in a second year of determining the status of the Beaver Kill - Willowemoc Creek trout fishery. The summer of 2001 experienced a significant drought period which affected trout distributions and fishing use. An estimated 62,316 hrs of angling use occurred in the 15 census reaches during 2001. This was a 20% reduction from year 2000 levels that was attributable to a near complete cessation of fishing activity during the low water and high water temperature period from late July through early September. The overall catch rate for the 2001 season was 0.47 trout/hour with rates for the different study reaches varying from 0.25 to 0.97 trout/hour. Overall, as in 2000, only about 10% of trout caught were kept. However, outside the "no-kill" regulations areas about 1/3 of the anglers who caught trout kept at least one. Total estimated harvest for the watershed was about 3,000 trout.

A large majority of the trout caught systemwide were brown trout (91.5 %) but rainbow trout contributed to the catch (30%) in the lowest reach of the Beaver Kill and brook trout were important in upper Willowemoc Creek (26% of catch). Again in 2001, most Beaver Kill anglers were flyfishers and most were visiting from outside the Delaware and Sullivan County area.

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Habitat Management and Restoration

Region 1

Lake Ronkonkoma Riparian Vegetation Restoration

On Saturday, April 28th, Aquatic Biologist, Fred Henson, directed volunteers from the Long Island Bassmasters and the Lake Ronkonkoma Organization in planting yellow water lilies and wetland trees along a little-used section of the northeast shore of Lake Ronkonkoma. Due to Lake Ronkonkoma's history of development, little near shore vegetation exists today. Over 75 lily tubers, obtained from a nearby pond, were planted in Lake Ronkonkoma. In addition, 100 streamco willows, 100 silky dogwoods, and 25 red maples from the DEC's Saratoga Tree Nursery were installed.

Carmans River Habitat Improvement

On Thursday, May 3rd, members of the Art Flick Chapter of Trout Unlimited in coordination with the Regional Fisheries Unit, planted 25 red maple, 15 buttonbush, and 15 silky dogwoods in two areas along the Carmans River lacking in overhead cover for brook trout. To determine whether deer browsing is a significant problem, some trees were planted in tree tubes and others were planted without protection. TU members will be collecting local seed and sending it to the Saratoga Tree Nursery to be grown out for use in future plantings. The growth and survival of the plants in both of these projects will be monitored over the next several growing seasons.

The Regional Fisheries Unit is also working with the Art Flick Chapter of Trout Unlimited to develop a plan for replacing a failing double wing deflector structure and constructing a bank cover structures. Recent information exchanged with TU members working on Cape Cod streams suggests that bank cover structures would likely benefit the Carmans River. It was agreed that the Art Flick Chapter would provide plans to Fred Henson who would draft a Freshwater Wetlands Permit application.

Hempstead Lake Vegetation Project

Restoring vegetation to Hempstead Lake is a major goal of the Region 1 Freshwater Fisheries Unit. Hempstead Lake had abundant submergent vegetation through the 1960s when a drought caused a massive dieback of the vegetation. Sewering of Nassau County has dropped the average lake level, pulling the shoreline away from the established vegetation. To help re-establish a vegetated shoreline, trees were planted at Hempstead Lake on May 3rd, 2001, in an effort to increase aquatic habitat and riparian cover for fish in the lake. The Region One Fisheries Unit is also concerned with establishing floating vegetation. Water lilies planted in 2000 established two beds approximately 30 feet across during 2001. With this success in mind, fisheries staff took advantage of low water caused by the drought of 2001 to set up eight S-curved fence sections (20 to 30 ft in length) in December, 2001. These sections were placed on the east and west sides of the lake. Areas selected were chosen for the proximity to two peninsulas in the pond to protect the future planting areas from prevailing winds. Past experience from the 2000 water lily planting has shown that planting water lilies under the snow fence was very successful. More water lily planting was planned for the Spring of 2002, but the lowest spring water level in over 10 years prevented the planting. The fence will be left up and planted during the spring of 2003. Soft stem bullrush and cattails were also planted in December, 2002, at various locations along the shoreline where the water's edge would typically occur during normal water conditions. Both the soft stem bullrush and cattail sprouted in 2002. Additionally, in February, 2002, Regional fisheries staff spread seed from approximately 25 cattail heads in the north end of Hempstead Lake. This was a further attempt to take advantage of the low water conditions due to the ongoing drought. Seeds were scattered in areas of mud flats that would be covered by one to two feet of water during a normal spring.

Carll's River Habitat Improvement - On January 19th, Biologists Fred Henson and Gregory Kozlowski joined members of the Long Island and Art Flick Chapters of Trout Unlimited to walk the Carll's River from Park Avenue to Southards Pond. The purpose of the walk was to evaluate the quality of trout habitat provided by that section of stream and identify any opportunities for stream habitat improvement projects. The consensus was that the stream was in pretty good shape and that the biggest problem was litter. A couple of places where deflector structures might be appropriate were identified. Some individuals felt that the stream

channel was overgrown with brush. However, the biologists pointed out that coarse woody debris is important as trout habitat. At the conclusion of the meeting the T.U. members discussed plans for a stream corridor litter cleanup day.

Region 4

Beaver Kill Stream Improvement Projects

A stream restoration project designed to reduce flood damage and improve trout habitat in the Beaver Kill watershed was completed this past September. The main focus of this work was Horton Brook, a narrow, flood-prone valley in the Town of Colchester, Delaware County. Some 400 feet of the lower stream channel was reconstructed and the adjacent stream banks were graded back in order to restore some degree of natural stability to this reach. The combination of the redesigned channel and a recent bridge project by the Delaware County DPW is expected to reduce flood damage at the site, and should significantly improve the ecological function of Horton Brook as part of the Beaver Kill system.

Several berms were removed on upper Horton Brook and the main stem of the Beaver Kill. Approximately 500 feet of berms and approximately 1500 cubic yards of fill were removed from the flood plain and stream bank of Horton Brook. A 400 foot berm on the main stem of the Beaver Kill near the mouth of Horse Brook was also breached, opening up an additional three acres of flood plain. Ultimately, this work should help narrow these stream channels leading to improved trout habitat and reduced water temperatures.

Region 5

Flow Monitoring Weir Installed at Whiteface Ski Center

Whiteface Ski Center completed construction of the flow monitoring weir on the West Branch Ausable River. The ski center withdraws water from the river for snow-making, and at critically low river flows the withdrawals could severely impact the aquatic life of the river. Therefore, DEC pursued a requirement for the Ski Center to monitor river flows and discontinue withdrawals during extreme low flow events. The Ski Center awarded a contract for constructing the flow monitoring facilities. The weir provides the ability to accurately and continuously monitor when river flows are low. Water withdrawals for snow-making will be discontinued when river flows decline to critically low levels. DEC and ski center staff will formalize operational, compliance, and record keeping procedures.

Region 6

Whirling Disease

Regional stocking records were reviewed to determine where potentially WD positive rainbow trout were stocked in 1993 and 1994. The stocked waters were reviewed to determine the potential of having transferred WD to wild trout populations, The greatest potential was in tributaries of East Branch of Fish Creek and the upper Black River. Samples of 20 yearling wild brook or brown trout were collected from four tributaries of the East Branch and 3 tributaries of the Black River. All samples were WD negative. An additional sample was collected in the Rome Hatchery Outlet. This body of water was positive in 1994-1996 but has been WD negative since.

Habitat Management and Restoration

Region 6 fisheries staff electrofished the Soft Maple Bypass of the Beaver River in cooperation with Trout Unlimited, the USFWS and Orion Power for their FERC relicensing plan. A viable wild brook trout population was found due to the minimum flow established four years ago. Previous surveys found few, if any trout. This survey revealed a brook trout population of 40 1+ and older trout per acre. They ranged in size from 2 to 9 inches and represented four year classes. Other fish species were also present in higher numbers. Don Meissner of WPBS TV, Watertown, filmed the operation for his national show, Rod and Reel Streamside.

Pond Liming

Two Region 6 Adirondack lakes were treated during 2001-02. These include Clear Pond (AKA Hedgehog Pond) which received 10 tons of Agricultural lime March 5 & 7, and Horn Lake, which received 20 tons of lime on March 19 & 28. Horn Lake is the source water for the Horn Lake strain of Adirondack brook trout. Maintaining this lake's naturally spawning population remains a very high priority. It was last treated with lime in 1994. Lime was transported to both of these waters via NYS Aviation Unit helicopters.

Region 7

Whitney Point Reservoir Habitat Improvement
In cooperation with the Whitney Point Reservoir Fisherman's Association 20 root wad structures were placed along the southeast shoreline of Whitney Point Reservoir, north of Dorchester Park. The structures were placed to provide shelter for fish. Under the direction of Bureau of Fisheries staff, Division of Operations pulled the root-wads into place with a front end loader and the volunteers, under their "adopt-a-resource agreement," secured the structures in place. The structures were secured with 3/8 in. galvanized steel cable and anchored with two or three auger-style anchors typically used to hold mobile homes. All root-wads were situated in four to seven feet of water with a minimum of 18 inches of clearance below the summertime water surface. The cable was donated by a local utility company and the anchors were purchased by the Whitney Point Sportsman's club. The Corps limited the number of root-wads which could be placed this year in order to evaluate whether they would remain in place. If these don't move more root-wads will be placed in the reservoir next year.

Stream Reclassification Surveys
Two Streams, Halfway Brook in Chenango County and Triangle Stream in Broome County were surveyed for the presence of trout. If documented, the data would be presented at a watershed reclassification hearing, when scheduled, to give protection under Article 15 of the Environmental Conservation Law. No trout were found in either stream.

Region 8

Catharine Creek Aquatic Habitat Restoration
Work continued in 2001 on this Clean Water/Clean Air Bond Act funded project. During the late summer and fall of 2001, two log pyramid bed sills were constructed by Camp Monterey inmates supervised by DEC Operations staff. One replacement structure was built in Millport, and one new structure was built on DEC owned land on the main stream just below Millport. Three or four structures per year will continue to be constructed until all of the bed sills proposed in the *Catharine Creek Aquatic Habitat Restoration Plan* are built. Additional monies from the Environmental Protection Fund were awarded to this project in 2000. These funds will be used in 2002 to complete the lower priority sites of the *Plan* that were eliminated when insufficient Bond Act funds were awarded in 1997.

Naples Creek Aquatic Habitat Restoration Project
In July 2000, this project was awarded Clean Water/ Clean Air Bond Act funds during the 1999-2000 appropriation cycle. From April 2001 to June 2001, site inspections were conducted, project plans were prepared, permit applications were made, construction plans were discussed, and partnerships with the Ontario County SWCD, and Town and Village of Naples were formed. Construction began on July 30 and ended by permit condition on November 15, 2001. All of the sites proposed for the main stream except one were constructed. Inspections during the winter of 2001 showed that most of the sites are performing as expected. Some minor remedial work will be needed at a few sites. Willow bank stabilization plantings, construction of the last main stream site, the minor remediation, and all of the proposed sites on Grimes creek will occur in the spring and summer of 2002.

Whole Lake Fluridone Treatment DSEIS
According to the Lake Association, recreational use of Waneta and Lamoka Lakes is hampered by the submersed aquatic plant, Eurasian water milfoil. In response to this problem, the Association applied for Aquatic Herbicide and Freshwater Wetlands permits to treat both lakes with the systemic herbicide, fluridone (brand name Sonar). The systemic mode of action of this chemical requires that the whole lake be treated with a low dose (6-12 ppb) over a 60 day period. Under this treatment regime, fluridone apparently targets only milfoil. Because Waneta Lake is the Region's only muskellunge fishery and both lakes have valuable warm water fisheries, Regional staff are concerned that loss of aquatic habitat provided by the vegetation will adversely affect aquatic life in the lakes. Because of these concerns, the permit applications received a positive declaration under the State Environmental Review Act (SEQR), requiring the preparation of a Draft Supplemental Environmental Impact Statement (DSEIS). Considerable staff time was spent reviewing the application, supporting documents, relevant literature, and meeting with the applicants. The DSEIS was submitted January 2, 2002 and our comments were provided to the applicants on March 12, 2002.

Region 9

Wiscoy Creek

Wiscoy Creek is western New York's best wild brown trout stream and has been intensively studied by BOF for over 50 years. Wild brown trout biomass has consistently averaged over 100 lbs/acre (1500 - 2000 age 1+ and older trout) the last 20 years with some areas supporting more than 200 lbs/acre (see Wiscoy Creek report under Coldwater Streams). In 2001, Western New York Trout Unlimited and BOF put together a project to help a large dairy farm minimize impact to Wiscoy Creek. This included constructing a bridge to allow crossing of both livestock and farm machinery, building 300 feet of log cribbing to stabilize a bank that was prone to erosion near farm buildings and manure storage, installing 3800 feet of fence to keep livestock from destroying streambanks and riparian vegetation, constructing an overflow channel to take flood waters away from farm operations, installing angler step-overs across fences where needed for fishermen access, and planting riparian trees and vegetation. The project cost about $50,000 including National TU providing $9000, WNY TU $10,500, local grants administered through the Wyoming County SWCD of $14,436, the landowner $10,690, and USFWS $4500.

Extension, Education and Outreach

Participation in Outdoor Sporting Shows
Bureau staff set up and participated in eight outdoor shows including Springfield, MA, Hartford, CT, Harrisburg, Pa, Cleveland, OH, and Nassau, Suffern, Albany, and Rochester, NY. A primary focus of attending these shows is to inform resident and non-resident anglers about our extensive freshwater resources and angling opportunities.

First Fish Program
DEC continued its *First Fish Program*-- which celebrates the first fish caught by an angler. Aimed at youth, but recognizing all new anglers, the program gives participants an award package that consists of a personalized letter of congratulations from the governor, a personalized certificate with date, location, species and size of fish caught, a first fish sticker, a freshwater fish brochure and a card that can be returned to receive a full color wall poster. The materials feature the "PEANUTS" characters, which are being used with the permission of the late Charles Schulz under an exclusive free contract with United Feature Syndicate, Inc. During the report period the program awarded over 8,000 anglers.

Internet
The Internet continues to explode in popularity and users are constantly requesting additional materials be made available on the web. Because of this, more time and effort is being spent on internet activities, and less on print-based materials. Bureau continued to convert existing Bureau of Fisheries materials into HTML format to go on-line, plus developed additional materials for inclusion on the web. As a result, DEC's website www.dec.state.ny.us continued its rapid growth in both content and public use. The site now contains more than 1,100 pages of fish, wildlife and marine content. Fish, wildlife and marine content remains among the most popular on the site. In addition to updating materials currently on the site, some of the bureau information completed for the web this year includes: fish stocking lists by DEC Region; a list of state boat launching sites; the My First Fish Program; the Angler Achievement Awards Program; popular warmwater fishing waters; and updating of the fishing regulations.

In addition, Bureau staff continued to maintain the FW FISH mailbox on the Department website (www.dec.state.ny.us). FW FISH is one of the more popular mailboxes on the Departments web-site. Over 1,500 e-mails were either directed to the Regions or other programs for answers, or answered directly by Central Office staff. Common e-mail requests included assistance with the interpretation of fishing regulations, spring trout stocking plans and finding appropriate fishing locations for various species throughout the state. The mailbox is also a popular locations for anglers to express opinions on the overall Bureau of Fisheries program, as well as the reporting of violations of the Environmental Conservation Law.

Region 1

Sweet Water Angler
The *Sweet Water Angler* has entered its ninth year of circulation. The circulation goes out to 4,300 addresses with an additional 500 to 1000 copies handed out at various events and though phone inquiries. The circulation is expected to increase dramatically in the next year with the addition of a two page marine section and a 2 page New York City section, making the newsletter relevant to a wider audience. In order to make back issues of the *Sweet Water Angler* more available, all 29 back issues are now available on the web in PDF format for downloading at http://www.dec.state.ny.us/website/reg1/sweetwater2.html. New issues of the Sweet Water Angler will be posted on the internet by March 1, June 1 and September 1 of every year.

Spring Fishing Festival at Belmont Lake State Park
On April 21, 2001, the Region 1 Freshwater Fisheries Unit coordinated the Spring Family Fishing Festival at Belmont Lake State Park. This was the fifth Spring Family Fishing Festival conducted by the NYSDEC at this location. An estimated 2,000 people attended the festival a 50% increase in attendance from the previous year. Bait (provided by NYSOPRHP) was furnished to all who needed it. The Fisheries Unit had 175 fishing rods (donated by Shakespear, NYFTTA and the Art Flick Chapter of Trout Unlimited) available to loan out.

During the course of the day these rods were loaned out to 436 people. Because the day was declared a Free Fishing Day, no fishing license was needed. However, 74 Fishing Licenses were sold at the Festival for a total of $964. Polaroid pictures (donated by the Fishing Line) of people with their catch were taken to give them a memento of the day. Fisheries staff offered to clean and ice the catch for anyone who wanted to keep their catch. During the Festival over 150 trout were cleaned for participants. In addition to giving people the opportunity to fish, four fishing seminars were given through the day on Fly-fishing in ponds, Fly-fishing in streams, Bass fishing light, and Bass fishing basics. Children attending the seminars had a chance to participate in a free raffle at the end of the seminar. Seminar prizes were donated by the DEC and Trout Unlimited. Fly casting and fly tying instruction was also provided during the event. Finally, as a bonus treat for the kids, a moon bounce and face painting were provided by State Parks. Co-sponsors of the festival included NYSOPRHP, The Fishing Line, NYFTTA and Entenmann's. Cooperating organizations included the Long Island Bassmasters, Art Flick Chapter of TU, Long Island Chapter of TU, Freshwater Anglers of Long Island and Long Island Flyrodders. The club organizations really came through to provide the man power necessary to run this event. Overall, the event was considered a big success.

Family Fishing Day Clinic at Hempstead Lake State Park

The Region 1 Freshwater Fisheries Unit hosted its 10th annual Family Fishing Day Clinic at Hempstead Lake State Park on Saturday, August 18th. Over 100 children and adults attended the event, with 65 kids participating in the clinic. The children, ranging in age from 4 to 12 years old, received group and individual instruction on the fundamentals of freshwater fishing, environmental ethics and aquatic ecosystems.

Staff from the Region 1 NYSDEC Fisheries, Law Enforcement and Administration Units and volunteers from The Freshwater Anglers of Long Island conducted a "Round Robin" teaching session with five stations, including Angler Ethics, Fish Identification, Basic Freshwater Fishing Tackle, Aquatic Ecology and Care and Preparation of Your Catch. After the educational presentations, the children had the opportunity to compete in a casting contest. Rod and tackle box prizes were awarded to kids that were able to cast closest to targets placed on the ground 30 feet away. The overall winner was a young girl from the "7 and under" age group that cast within 1 foot of the target!

The Freshwater Fisheries Unit provided rods, tackle and bait so that clinic participants could fish at nearby McDonald Pond. The resident bluegill and pumpkinseed sunfish were very cooperative on this day, and nearly everyone caught fish. There were even several largemouth bass caught. Several kids and adults caught fish for the very first time!

Overall, the clinic was a great success. Numerous parents and kids expressed their appreciation to DEC staff as they were leaving the park. With their bellies full from the freshly prepared catfish and hush puppies and their minds brimming with new ideas for future freshwater fishing trips, many of these people will likely be returning to Hempstead Lake State Park for the next festival in the fall. The Region 1 Freshwater Fisheries Unit certainly hopes so!

Fall Fishing and Children's Festival 2001 - The Regional Fisheries Unit successfully coordinated the Ninth Annual Fall Fishing and Children's Festival at Hempstead Lake State Park on Saturday, October 20. Over 2,100 people attended the festival, a 75% increase in attendance from the previous year. Bait was provided to all who needed it and rods were loaned to 761 people during the day. Eighty per cent of the rods loaned out were to children under 16 years old and 35% were to people who had never fished before. The rods used were donated by Shakespeare, The New York Tackle Trade Association (NYFTTA) and The Art Flick Chapter of Trout Unlimited. DEC Staff stocked South and McDonald Ponds with trout from the Connetquot River State Park hatchery the day before the event and offered a fish cleaning service to anyone wanting to keep their catch. Over 50 trout were cleaned for festival participants during the event. In the Casting for Pumpkins contest children could cast into a pumpkin field and keep the pumpkin they hit. The field was also seeded with prizes donated by The Fishing Line, NYFTTA and the Conservation Officers Association. Next to fishing, this was the most popular activity at the Festival. Boy Scouts from the Theodore Roosevelt Council ran the casting for pumpkins contest. Children could get their picture taken with their catch and keep the photo. The Polaroid film was provided by The

Fishing Line. This event was declared a Regional Free Fishing Day so that fishing licenses were not needed for those attending the event. However, fishing licenses were offered for sale at the event and a total of $374 in licenses were sold. Cosponsors of this event included State Parks, The Fishing Line, NYFTTA and Entenmann's Bakery . Participants included members of Trout Unlimited, the Long Island Bassmasters, The Freshwater Anglers of Long Island, The Long Island Flyrodders, Suffolk Alliance of Sportsmen, the Boy Scouts and other interested sportsmen. In addition to the Region 1 Fisheries Staff, Region 1 License Clerk Jackie Pasquini and Region 2 Natural Resources Supervisor Jim Gilmore assisted with the event.

Deep Pond Cub Scout Fishing Clinic
On June 16 the Regional Fisheries Unit conducted a fishing clinic for the Cub Scouts of the Theodore Roosevelt Council of Boy Scouts of America. The clinic was held at Schiff Scout Reservation in Wading River. About 80 scouts attended. They were given instruction in Fish Identification; Fishing Tackle and Basic Fishing Techniques; Fishing Regulations and Angler Ethics; and Aquatic Ecology. After completing the basic instruction each Cub Scout was provided with a fishing rod and bait and given the opportunity to fish in Deep Pond. Most of the children caught fish and all had an enjoyable and informative day.

Suffolk County Girl Scouts Fishing Clinic
The Regional Fisheries Unit with volunteer assistance from the Long Island Bassmasters and the Suffolk County Seniors Fishing Club conducted a fishing clinic for 30 Brownie and Junior Girl Scouts at Camp Edey in Bayport. The two hour event began with instruction on fish identification, basic fishing tackle and conservation law and ethics. The girls were then provided with bait an fishing rods and given the opportunity to fish in the Camp Pond. After a slow start, the fish began biting and by the end of the clinic nearly every girl had caught a fish, many for the very first time.

Nassau Conservation Days - On May 1st, Fishery Biologist Greg Kozlowski and Technician Tom Hughes participated in the Nassau County Conservation Days at Old Bethpage Village Restoration in Old Bethpage, NY. Approximately 500 5th grade students from several different Long Island schools attended the event. Greg and Tom set up a display and talked about the different methods fishery biologists use to capture fish and the life history and biology of Long Island's native fishes.

Fly Fishing Seminar
On July 13, 2001, a Flyfishing Seminar was held at Caleb Smith State Park from 6:30 to dusk. Dave Sekeres was the guest instructor. Ten participants attended the seminar, the maximum allowed due to space restraints. Participants were instructed in the basics of rol1 casting with some back casting demonstrations also given. Most people caught fish, including brook trout, bluegill, and largemouth bass. All participants left with smiles on their faces and a thank you to the instructor. This was the second of seven fishing seminars coordinated by the Region 1 Freshwater Fisheries Unit for the summer of 2001. The seminars are designed to raise the knowledge level of beginning anglers and to give them the skills to further enjoy their fishing experience.

Seasonal Bass Fishing Seminar Held
On July 18, 2001, the first of a three part bass fishing seminar series titled "A seasonal approach to bass fishing" was held at Belmont Lake State Park. The seminar was co-instructed by bass tournament anglers Chris Zarnitz and Michael Wiltshire. Seventeen people attended the seminar and learned about rods, reels, line, and different lures and how to fish them. Each of the participants was given free handouts from Rattlesnake, a sponsor of the seminar. The remaining two seminars in this series are scheduled to take place at Belmont Lake State Park in August and September.

Cub Scout Pack 363 Fishing Clinic Held
On August 4, 2001, Fisheries Biologist Greg Kozlowski conducted a fishing clinic for Cub Scout Pack 363 at Hempstead Lake State Park. Fifteen cub scouts and seven other children attended the clinic. They learned about the rates that different materials that could end up in water bio-degrade, freshwater fish identification, and basic freshwater fishing tackle and techniques. At the end of the educational session, the scouts were given time to fish. All the scouts caught fish, including pumpkinseed, bluegill and largemouth bass. All fish were released. This clinic has been held for this pack annually since 1996.

Girl Scout Fishing Clinic at Camp Edey
On August 23rd, technicians Lauren Papa and Tom Hughes from the Region 1 Freshwater Fisheries

Unit participated in a fishing clinic for the Girl Scouts at Camp Edey in Sayville on the Sans-Soucci Lakes. The clinic was coordinated by the New York Fishing Tackle Trade Association (NYFTTA) with involvement from the NYSDEC, USFWS, Recreational Fishing Alliance (RFA) and the Long Island Beach Buggy Association (LIBBA). The Region 1 Freshwater Fisheries Unit provided the bait, rods and tackle for the event.

Approximately 200 girls, ranging from 6 to 14 years of age, participated in the clinic. The children and their camp counselors attended the clinic in 45 minute shifts throughout the day as part of the camp's daily session. Each group was given five to ten minutes of instruction by Regional fisheries personnel about fish species present in the pond and the basic use of spincasting outfits. Then, those who wanted to fish were taken down to the pond and those who wanted to practice casting were given one on one instruction by fisheries staff**.** Over all, most of the girls caught fish and had fun. Several even caught their first fish ever**.** One young girl twice hooked into a bass that exceeded 6 lbs.! Her hook was straightened out by the enormous fish on both occasions, however, not before her screams of "I've got one" could be heard from all over the pond.

Long Island Fall Festival at Huntington
On Saturday, October 6th, the Region 1 Freshwater Fisheries Unit participated in the 8th annual Long Island Fall Festival at Huntington. The four day event, sponsored by the Huntington Township Chamber of Commerce, attracts over 250,000 people each year. This was the first year that the Regional Fisheries Unit with the cooperation of the Town of Huntington provided a "Fishing Hole" at Heckscher Park Pond during the Long Island Fall Festival. The program was run by Region One Fisheries staff with volunteer assistance from the Freshwater Anglers of Long Island, the Long Island Bassmasters and Rosa Colomba of Region One Administrative staff. The spincasting fishing outfits, tackle, and literature were provided by the Region One Fisheries Unit, while the bait was provided by the Huntington Chamber of Commerce.

Despite terrible morning rains and high winds, the festival was a success. After the storms cleared, people were eager to fish. By day's end, over 150 rods had been loaned out and many children had caught their "First Fish" ever. Rods and bait were loaned to those children that wished to fish, and one on one casting instruction was given by Regional staff and volunteers. Over all, it was a fun day for all who participated, and people seemed eager to see Region 1 Fisheries Unit back at the festival in 2002.

Children's Fishing Clinic at Peconic River Sportsman's Club At the invitation of the Peconic River Sportsman's Club, Fred Henson conducted a children's fishing clinic at Donahue's Pond on the club property. The program consisted of a lesson on the importance of the aquatic food web to good fishing followed by angling with instruction and supervision by Fred Henson. Live insects and other aquatic organisms were collected from the pond to introduce the children to some of the often overlooked components of the food web. The kids were fascinated by the scary looking bugs, especially when an ornery backswimmer bit Fred on the hand. The concept of the food web was reinforced by playing the "Food Web Game." While the clinic was a hit with children and parents, overall attendance, at eight children, was too low to justify repeating the event at that venue.

New York National Boat Show
The Region1 Freshwater Fisheries Unit was actively involved in the New York National Boat Show, held at the Jacob Javits Convention Center from January 5-13, 2002. The Fisheries Unit's electrofishing boat was a significant part of the DEC display this year. Region One Fisheries Staff delivered to boat to the Javits Canter in advance of the show and transported it back to Long Island after the show. Region One Fisheries Staff helped man the display on all four weekend days of the show and assisted with the Casting for Bass Contest. Region One Fisheries Staff also assisted Region Two and Central Office Staff with takedown of the display after the show and transported the Fish and Wildlife Display to Long Island for Use at the National Sportsman's and Outdoor Expo in Nassau County.

National Sportsman's and Outdoor Exposition
Region One Fisheries Staff coordinated the setup of the DEC Display at the National Sportsman's and Outdoor Expo held at the Nassau Coliseum from January 17-21, 2002. Fisheries Staff also provided booth coverage for the entire show. In addition to answering numerous questions about fishing and hunting opportunities on Long Island, 55 fishing licenses were sold at the show.

Brentwood Sportsman Show
The Region 1 Fisheries Unit coordinated the DEC attendance at the Long Island Sportsman and Camping Show held at the Suffolk Community College Sports and Convention Center in Brentwood from Friday, March 8, through Sunday, March 10, 2002. While there, over 121 people signed up for the *Sweet Water Angler*. During the show, 104 fishing licenses and 14 senior fishing license were sold. This was the first time that this show was held and it was very well attended. Staff was kept busy throughout the show answering questions and issuing licenses. Regional staff from the following Units participated: Fisheries, Wildlife, Environmental Conservation Officers and Sportsmen Education. Fish and Wildlife Outreach Coordinator Clark Pell, from Central Office, Bureau of Fisheries, and his staff transported the DFWMR Exhibit from Albany to Long Island and back and completed the exhibit set up and take down. They were the only Central Office representatives that participated in the show.

Summary of Extension Efforts
The Regional Fisheries Unit reached the following number of people through their Extension, Education and Outreach efforts:

Fishing Clinics (6):	405
Fishing Festivals (2):	4,100
Fishing Seminars (5):	105
Other Events (5):	850
Sweet Water Angler:	4,300

Region 2

New York National Boat Show, Manhattan
For the fourth straight year the DEC improved its exhibit at the NY National Boat Show. Held January 5-13 at the Javits Center, this year's event was attended by approximately 98,000 people. The exhibit was manned by DEC staff from Fish Wildlife and Marine Resources, Law Enforcement, the Hudson River Estuary Program, Public Affairs and Education and Water and Pollution Prevention. The exhibit included mounts of state-record fish, an electro-fishing boat, a casting pool for the hugely popular Backyard Bass game, a freshwater aquarium full of brook trout, a saltwater aquarium full of striped bass, flounder a sea robin and a blackfish, and an interpretive video describing electro fishing. The *Conservationist* magazine featured button-making, a "picture yourself" photo for the cover of the magazine, a raffle for a free kayak and other giveaways. The Hudson River Estuary program brought down their 6 foot sturgeon mount and video-microscope which allowed people to see live microscopic biota**.** The highlight of the show was Commissioner Crotty's announcement of the "I Fish NY" initiative.

Prospect Park Fishing Clinic, Brooklyn
On June 23 the Region 2 fisheries unit and the Forest Rangers held a fishing clinic in conjunction with the New York City Parks Department and local angling associations at Prospect Park Lake. Despite the torrential downpour, 50 new anglers showed up for the clinic, where they learned about fishing techniques, equipment, fish identification, and fishing regulations. High catch rates kept participants happy and a few even managed to catch largemouth bass. Nearly 100% of those preregistered for the clinic showed up. This was Region 2's first clinic of its type and we learned that volunteers given the responsibility of education need to be given more hands on pre-clinic training, and that a large tent would be a good idea for future clinics.

Gantry Plaza Fishing Clinic, Queens
On October 27, as part of the "I Fish NY" initiative, Region 2 fisheries staff in conjunction with the Bayside Anglers Group, held its first saltwater pier fishing clinic**.** The clinic was designed to give participants an intensive educational experience as well as an opportunity to catch some fish. Each participant went to each of the four educational sections that focused on; fishing tackle and safety, fishing ethics, fishing regulations and advisories, and fish identification. After they completed the education sections we set them up with fishing gear and bait. There was plenty of time to give each participant one-on-one instruction on how to bait a hook, how to cast safely, how to feel a bite and how to set the hook. Species caught included striped bass, cunner and black sea bass. The clinic was attended by 50 local school children and parents. The pier size will probably not allow us to expand the clinic size to more than 70 participants. Gantry Plaza State Park proved to be an excellent location for such a clinic and we hope to make this clinic an annual event.

Getting Started in Fishing Program
As part of the "I Fish NY" initiative, Region 2 fisheries staff have guided our Student Conservation Association (SCA) members in the development of a new classroom based fishing education program called "Getting Started in Fishing". This is a two part program where we go into classrooms in the fall and winter months to teach topics related to fishing, then take these same students on a fishing field trip in the spring.

Our lessons and field trips agree with the New York State Board of Education Standards. The first lesson consists of a basic introduction to fish in which the students learn general fish anatomy. Activities may discuss adaptations that fish have that allow them to survive in water as well as species specific adaptations. They may create their own fish with a variety of different adaptations and discuss what type of habitat that fish could live in. Topics covered in the second lesson may include the food chain, fishing ethics and an introduction to basic fishing gear and skills. They may test their knowledge on our fishing pond poster, in which they can choose a habitat to "fish" in as well as bait and equipment. The activities that we do with each class provide the students with an interactive and thought provoking way of learning about one of New York City's most abundant natural resources.

During the winter of 2000-2001 we made it into 20 different classrooms, teaching students from Kindergarten to Eighth grade**.** This winter we nearly doubled our outreach by getting into 38 classrooms. The program has been well received by local teachers and will continue to grow assuming we can keep a strong SCA presence in Region 2.

Digital Presentation Manual Completed
Regional Fisheries Biologist Greg Kozlowski spent most of the 57th Northeast Fish and Wildlife Conference working in the presentation preparation room and earned the appellation "AV Dude". During the Conference, he had the opportunity to witness many common and uncommon issues regarding digital presentations. Using his experiences with digital presentations, Greg wrote a guidance document titled Digital Presentations Dos and Don'ts. The digital presentations document was created to assist presenters and conference organizers. While the document was created primarily for DEC staff, there have been numerous requests for it from outside the Agency. To date, it has been distributed to Cornell University, College of Environmental Sciences and Forestry, and the NYSDOS. A copy was also provide to the State of Maine, Department of Inland Fisheries and Wildlife, the sponsor of the 58th Northeast Fish and Wildlife Conference. Maine IFW electronically posted the document on its conference web site as a guide to presenters. The web site link is: www.state.me.us/ifw/meetings/nefishwildlifeconf/presenters.htm

Region 4

Indian Kill Fishing Event
Region 4 staff participated in the annual Indian Kill Fishing Open House/Fishing Day (Glenville, Schenectady County) sponsored by the Schenectady County Environmental Advisory Council. Representatives from the Department, Conservation Council, Trout Unlimited and other organizations provided resource information and hands-on fishing experience to some 200 youngsters as they tried to catch some 200 recently stocked Rainbow Trout. Instruction on everything from baiting a hook, to spin casting, to fly casting was provided. Commissioner Crotty was present to kick-off the event and to assist with the program. Prizes were awarded during a noontime ceremony by size of catch and age category. A good time was had by all.

Region 6

Youth Fishing Events and Extension
Exhibits or activities were provided to a number of events which focused on youth fishing/education. These included Fragile Wilderness exhibit at Watertown, a SAREP Fishing Camp for 65 kids, an aquatics exam for the Envirothon in Lewis and Jefferson Counties and Conservation Field Day for Lewis County, a Youth Fishing Clinic at Cranberry Lake Campsite, and a weekend Fishing Camp at Millsite Lake in Jefferson County.

To provide attendees with a better view of 21of NYS's rare fishes (live), staff developed a fish exhibit at NE Fish and Wildlife Conference in April.

Biomonitoring with fish
An index of biotic integrity (IBI) was devised for wadable streams and applied to a previous data set

from the Croton basin. This analysis was then applied to additional fish catches completed in conjunction with biomonitoring by Div. Water in 2001, from Ellicott Creek (Erie Co.) and the Allegheny basin. This allowed comparisons between the Ellicott Creek sites (7) and between recent and historic collections in five larger streams of the Allegheny basin.

Region 7

8th Annual Finger Lakes Fishing Festival
On Saturday, April 28, 2001 Regional Fisheries Unit assisted the Lime Hollow Nature Center in this highly successful event which uses the "Pathways to Fishing" program to introduce young people and their parents to fish and fishing. Over 450 children attended and moved through 10 learning stations where they were instructed on everything from casting and knot tying to fish biology and regulations. After completing the Pathways stations the children got the chance to catch their first trout in a stocked pond.

Falcon Sportsmen Club 49th Annual Children's Fishing Derby
On Sunday, June 10, 2001 Regional Fisheries staff provided a live fish display at this event which was attended by approximately 200 children and their families. A large aquarium was set up and filled with a variety of warm water fish. This allowed for close inspection by the children of many fish species common to central New York. Two large "fish petting tubs" were placed on the ground giving even the youngest angler a chance to make friends with the fishes.

New York State Fair
Region 7 Fisheries staff were represented on all 3 shifts of the fair manning the Division of Fish, Wildlife and Marine Resources booth inside the DEC Aquarium Building. Thousands of hunting and fishing licenses were sold and questions from the public were answered at the booth during this 12 day event from August 23 - September 3, 2001.

Salmon River Hatchery Open House
Regional Fisheries Staff assisted the hatchery in sponsoring this popular event held on National Hunting and Fishing Day September 22, 2001. A table was manned by a Regional Biologist and Technician to answer questions on the management of Lake Ontario and Salmon River Fisheries. Brochures were available on salmon fishing techniques, maps of the river, life history writeups of the Lake Ontario salmonids, stocking information and species identification. Coinciding with the major fall run of pacific salmon this event was attended by over 1000 people.

Conservation Field Days at SUNY Morrisville
On Tuesday, October 9, 2001 the Madison County public school system held this educational event for several hundred 6th grade school children from all over the county. A Regional Fisheries Biologist and Technician provided a live fish display and gave lectures to 8 classes on fish anatomy and identification.

Cayuga County Conservation Field Days
This two day event was held at Emerson Park in Auburn during September 2001. A Regional Fisheries Biologist provided a live fish display and gave lectures on fish ecology and biology to over 300 6th graders who came from school districts all over Cayuga County.

NYC Boat Show
A Region 7 Fisheries Biologist worked at the Division of Fish, Wildlife and Marine Resources booth for 9 days from January 5-13, 2002 held at the Jacob Javitt's Center in New York City. This high-profile event draws over 100,000 people annually an is an excellent opportunity to promote New York's fishing resources to a wide and diverse audience.

Fishing Hotline
Both telephone and Department website versions of the Region 7 Fishing Hotline were updated weekly. The telephone version received 150 - 400 calls per week and was exceeded by the website version.

Region 8

Public Meetings held on Special Trout Fishing Regulations
Two public meetings were held in June to consider public sentiment towards new trout fishing regulations. One was held in Campbell, the other in Caledonia. One proposal being considered was a regulation to be implemented on all Region 8 trout streams, excluding the Great Lakes and Finger Lakes. It would allow five fish of any size to be

kept, with no more than 2 greater than 12 inches in length. The purpose of such regulation would be to spread out the harvest of stocked two year old brown trout. This regulation received considerable support from those who attended the meetings. A proposal was drafted and submitted for implementation beginning October 1, 2002. Another regulation that was considered at only the Caledonia meeting was the new no-kill regulation that was instituted on Oatka creek. A controversy erupted because local trout fishermen expressed their concern for the future of Oatka's wild trout fishery since the new regulation went into effect. They were afraid that the wild trout resource would be lost in the areas that were formerly governed by special regulations, and now have liberal harvest regulations. They feared the liberal harvest regulations sent the wrong message about the value of this wild trout resource. The meeting was held to gather more information from anglers on their desires for trout management on the Oatka. We found that Oatka anglers valued wild trout and wanted regulations to reflect this value. New, more protective regulations, were drafted and submitted for implementation beginning October 1, 2002.

Adult Fishing Clinic

The Fisheries Unit, in conjunction with the Region 8 Fish and Wildlife Extension Unit, conducted it's third summer fishing clinic aimed at an adult audience. The event was conducted at the pond located at the Regional headquarters. Approximately 20 adults were given instruction in fish identification, cooking, fishing techniques, casting and regulations. Despite excellent advertisement, the attendance did not seem to justify the effort, although the attendees were very appreciative. Next year's event will target both adults and children in an effort to boost attendance.

Public Information a Major Effort in Region 8

During the year, Region 8 personnel continued to spread the word on the fine fishing in New York State, especially in the western Finger Lakes Region. Production of the Fishing Line, a weekly update on area fishing, has been very popular. It is sent to 66 outlets by mail, fax and email and listed on Region 8's portion of the Department web page. This page on the website receives 2,000 to 3,000 hits a week and ranks in the top five consistently. Information from the Fishing Line is also included in the Region's weekly Hunting and Fishing Radio Reports taped by sixteen western New York radio stations with an estimated 250,000 listeners. The H & F Report is also available on the Region's web page receiving 400 +/- hits a week. News releases are sent to 223 outlets to inform the public of meetings, activities and management information. Four fisheries specific releases were sent during this period.

Participation in public gatherings is an additional means used to disseminate information on area fisheries resources and its management. Two events drawing thousands of people were the Rochester Outdoor Show and the Region's National Hunting and Fishing Day celebration. Staff have also participated in three DEC sponsored, or cosponsored, fishing clinics and have included aquatic resource management in twenty-nine presentations ranging from school groups to adult audiences. In addition fisheries oriented displays are maintained at the Region's Twin Cedars Environmental Area's center.

An additional effort was expended during the Governor's sponsored "Capitol for a Day" program during its session in Batavia. The Fisheries electro-fishing boat provided the back drop for a question and answer format.

Region 9

SAREP Family Fishing Day at Letchworth State Park

The second annual Letchworth State Park SAREP Family Fishing Day event was held on Saturday of Memorial Day weekend. Although attendance was slightly less than the first year of the event, it still exceeded expectations with over 300 children and over 200 adults attending the 6 hour event. Regional BOF had extensive input and participation at the event, which included teaching fishing at the stocked park trout pond, providing presentations on fish ID, and manning a fisheries display.

Internships/Volunteers

Region 9 BOF accepts interns from area high schools as much as possible. In 2001, four interns worked with Fisheries. Their work included office work such as date entry into computers and scale pressing, while field work consisted of electrofishing and netting. Additionally, the Region finds it helpful to use adult volunteers when needed. These come from angler groups such as Trout

Unlimited or are simply interested sportsmen. In 2001, 25 volunteers contributed 53 days of service to the Region. All interns and volunteers are approved through the Regional Director with appropriate paper work being filled out.

Youth Fishing Clinics and Aquatic Education Efforts

The Region continued to conduct educational efforts to introduce young people to sportfishing and spark interest in aquatic ecology. The outreach events are typically conducted in partnership with local sponsors such as conservation organizations or municipalities. A total of four free family fishing clinics were held, as well as the weekly program conducted at the Rushford Environmental Camp. Many other youth group clinics were attended, such as Boy Scout, Cub Scout, LOTSA Youth Clinic and Trout Unlimited clinics.

Western New York Fisheries Resources

The Fisheries resources slide presentation was given at eleven schools in Region 9 and "on the stream" electrofishing demonstrations were given at two schools. Fisheries presentations were also given at DEC's Rushford Environmental Education Camp in 2001. This effort reached over 950 students with the "Fisheries and Aquatic Resources of Western New York" program. The program is only requested at half the schools as was during the 1980's and 1990's.

Central Office - Inland Section

Northeast Fish and Wildlife Conference

Bureau staff were heavily engaged in the planning and delivery of the 57th Annual Northeast Fish and Wildlife Conference held at Saratoga Springs April 22-25, 2001. Inland Fisheries Section personnel played major roles chairing the Program and Arrangements Committees and the Registration Subcommittee. The Conference was very well received and all aspects of the program went smoothly. Over 800 people were registered and attended some 212 professional papers and 9 workshops and special symposia. A substantial contribution was made to the Association of NE Fish and Wildlife Directors for support of future conferences.

Australians check-out NY's fisheries programs.

Central Office staff coordinated and guided Australian government official on a fact-finding tour of New York's fisheries facilities/projects in August of 2001. The State of New South Wales Minister of Fisheries and Mineral Resources and the Agency Director of Fisheries toured the Salmon River hatchery, the Salmon River corridor, the Oneida Hatchery and visited the Cornell Biological Field Station at Shackelton Point. Staff from these facilities provided presentations and tours and all enjoyed interesting discussions about NY and Australian perspectives on and capabilities for recreational fisheries management.

New York National Boat Show

For the third year in a row, the DEC exhibit at the NY National Boat Show was a grand success. The highlight of the 2002 show was Commissioner Crotty's announcement of the new "I Fish NY" sportfishing outreach initiative. Endorsements for the program were also offered by Pat Augustine, executive director of the New York State Sportfishing Federation, Fred Thorner, vice president of the New York City Chapter of Trout Unlimited, and John Mantione, president of the New York Fishing Tackle Trade Association.

This year's exhibit was the largest yet. Along with the full 40' Division of Fish and Wildlife display of state record fish mounts, the exhibit included an 18' electrofishing boat provided by the Region 1 Fisheries Unit; a 180 gallon aquarium with native marine species provided by Normendeau Associates; and a 135 gallon aquarium with large Long Island strain brook trout provided by Connetquot River State Park and Preserve. The exhibit also included a promotional display by the Conservationist magazine, with a sea kayak that was given away to one lucky person; tables full of literature from the Divisions of Fish, Wildlife and Marine Resources; Public Affairs; Water and Pollution Prevention; and a display by the Hudson River Estuary Program with a 6' sturgeon and stereo microscope attached to a video monitor used to show people the diversity of Hudson River micro invertebrates.

Once again the Bureau of Fisheries Cast for Bass Contest was a top draw with kids and families attending the show. Shakespeare Fishing Tackle was the primary sponsor of the event, donating 100 rod and reel combinations and mini-tackle boxes. Backyard Bass and Cabela's were associate sponsors of the event. Ten casting contests were held and over 500 kids got a chance to either cast for the first time or to get some midwinter casting

practice. Every participant received a bag full of information that included the "Getting Started" manual designed to educate new anglers. Those that caught a bass received either a Shakespeare rod and reel combo or mini-tackle box, a backyard bass game, a Cabelas' Tackle Tote or gift certificates, as well as 20 NYSDEC Puzzles, 200 Lil Skipper dolls (the Boat Show mascot), 15 subscriptions to the Conservationist, and 20 passes to the Noah's Ark playground. The casting contest has provided an excellent means of reaching out to a large group of the general public, many of which are not currently actively involved in the sport of fishing. Whole families walk away feeling excited about the sport of fishing and have a new understanding of and appreciation for the Bureau of Fisheries and NYSDEC in general.

Sportfishing and Aquatic Resource Education Program (SAREP)

During 2001, the New York State Sportfishing and Aquatic Resource Education Program (SAREP) completed 9 instructor trainings involving 156 participants and 7 shorter term trainings involving 150 participants. Overall it is estimated that over 58,500 youth and 18,000 adults were involved with some sort of SAREP related programming in 2001. Instructors logged over 19,000 hours and taught over 1,300 programs.

Bureau staff spent significant time during the period working with SAREP leader Keith Koupal to revise the program to better meet the Bureau need for an introductory angling education program that will work in conjunction with the Division's new I FISH NY outreach initiative. Plans for SAREP over the next 5 years were developed to work closely with I FISH NY staff to improve the knowledge of fishing and aquatic resources in developed sections of New York, while maintaining support of active instructors throughout New York State. Unfortunately, Keith Koupal has left SAREP to explore new opportunities in fisheries management in Nebraska. Although plans have yet to be finalized, the Bureau of Fisheries has decided not to renew the SAREP contract with Cornell University and will likely incorporate the program directly into the I FISH NY initiative.

Public Access and Use

Public Use Section - Overview

Regional fisheries personnel obtained purchase agreements for 11.358 equivalent miles of public fishing rights (PFR) and six fisherman parking areas (FPA) during the period 4/1/01 - 3/31/02 (Table 1). Three new FPAs serving easement sections were developed. Since the assignment of $1,000,000 in CW/CA Bond funding to PFR purchases in 1997/98, over 28 (28.078) equivalent miles of new easements have been purchased along with 30 new parking area parcels, at a total cost of $912,929. Considering additional "pending" purchases, the original $1,000,000 is now totally committed.

It was estimated by Section staff last year (2001), that only about half of our total PFR holdings are properly posted. This means there are more than 600 equivalent miles of existing PFR that are not properly posted.

Engineering Design/Capital Construction

The Bureau of Engineering Services provided the Public Use Program with 3.0 staff-years of services this year consisting of: two staff years of design services from the "pool" of design engineers, and 1.0 year of design services provided by Deanne Blanke, Parks Engineer. This group provides all design work, permitting assistance, project bidding, contract award and construction oversight for the entire list of currently funded projects (see proceeding).

Access to Lakes, Ponds and Rivers

Regional staff effort devoted to acquiring and developing new fishing access sites remained at a low level. No general fund capital appropriations for new site development were provided in FY 01/02. However, in recent years, several project have been funded via allocations from the Environmental Protection Fund and the CW/CA Bond Act.

The status of all currently funded projects is listed in the following table.

Project	Amount/Source	Status
Hudson River at Luzerne	$400,000 Bond 99/00 $125,000 Bond 00/01	Completed 2001
Upper Chateaugay Lake	$280,000 Bond 99/00 $220,000 Bond 00/01	Under const.
Chazy Lake	$150,000 Capital 85/86 $ 50,000 Bond 00/01	Under const.
Oneida Lake at Godfrey Point	$250,000 EPF 99/00	Completed 2001
Tupper Lake	$400,000 EPF 99/00 $ 60,000 EPF 00/01	Under const.
Delaware River @ Narrowsburg	$200,000 EPF 99/00	In design & permitting
Riverdale/Greystone Stations (Lower Hudson River)	$650,000 EPF 00/	In design & permitting

During the year, two (2) new Fishing Access Site purchases were completed; Hudson R. at Moreau ("West River Rd. Marina") in Region 5, and Chaumont Bay - Lake Ontario ("Golden's Marina") in Region 6. Five additional small sites were secured via Cooperative Agreements, MOU's, etc. Nine new Fishing Access Sites were developed during the year. See Table 2 for details.

Region 1

Lake Ronkonkoma Fishing Access Renovation

The Region One Fisheries Unit coordinated with the Region One Operations Unit to carry out renovations of the Fishing Access Site at Lake Ronkonkoma during the period when the bass and walleye seasons were open. The site had experienced problems with sinking due to improper fill under the entrance road. In order to fix the problem the Regional Operations Unit excavated the driveway removing 150 cubic yards of improper fill and replacing it with clean fill. The Fisheries Unit assisted in getting NYSDOT to help transport the fill off site. The driveway was graded and graveled and the site was opened in time for the opening day of Walleye Season.

Region 3

DEC acquired one angler parking area parcel on the North Branch Callicoon Creek and one on the Beaverkill. Two new angler parking areas were constructed - one on the Willowemoc and one on the West Branch Beerkill.

A cooperative agreement was signed with the Village of New Paltz, Ulster County to develop two new boat access sites - one for cartop boats and one small trailer launch.

The Narrowsburg boat launch on the Delaware river is slated for rehabilitation with a $200,000 allocation from the Environmental Protection Fund and currently in the design/permitting phase.

Region 4

PFR Marking
A concerted effort to update the posting maintenance of Public Fishing Rights (PFR) easements was made in 2001. A seasonal employee was hired and his time devoted mainly to inspecting these easements and placing new signs where older ones were worn or missing. Because of staff shortages and other priorities, a number of locations have not been marked for several years, leading to confusion by landowners and fishermen alike. Under the guidance of Regional access specialist, this seasonal was able to correct and update signs on 103 of the 181 miles of PFR easements in Region 4 -- that's 57% of the Region's total PFR holdings! Twenty-seven staff days of effort were invested and the average re-posting rate was 3.8 miles/day. Many favorable comments have been received so we plan on bringing him on again for 2002 to complete the job.

New PFR
A new Fisherman's Parking Area and PFR easement were obtained on the Poesten Kill and Quacken Kill in Rensselaer County. An agreement has also been signed to purchase an additional 0.13 equivalent miles on the Poesten Kill adjacent to the recently purchased PFR.

Region 5

DOT and DEC Establish a Cooperative Car-top Boat Access Site to Ray Brook Pond
Fisheries staff met with representatives of the Department of Transportation (DOT) concerning public access to Ray Brook Pond, Essex County. Restoration of the Adirondack Railroad closed an informal access site to this stocked pond. DOT was agreeable to restoring public access but was concerned about safety for people crossing the tracks. Agency representatives agreed to pursue alternative access that avoided the railroad at the meeting, and DOT completed construction of the new site. DEC will provide appropriate signs.

Tupper Lake BLS Modernization Process Begins
The Bureau of Fisheries submitted permit applications for the reconstruction of the Tupper Lake Boat Launch Site on Route 30, Town of Altamont. Three permits were required and obtained, including an Adirondack Park Agency wetland permit, a NYS DEC Water Quality Certification, and a U.S. Army Corps of Engineers Permit. By making modifications to the design plan, the project qualified for coverage under the US Army Corps of Engineers nationwide permit. The project proposal included a new ramp and sheet-pile shore protection; paving and modernizing the parking area; installation of floating docks including a separate dock/access area for and handicapped access.

Construction began and a great deal of work has been accomplished toward the reconstruction of the Tupper Lake Boat Launch. The contractor, Delaney Construction of Mayfield, worked steadily since early January and made major strides despite mid-winter conditions. All site dredging was completed. The steel sheetpile shore protection was installed. The new concrete ramp was poured. The stone shore protection was installed along the west shore and the barrier-free handicapped access pier was constructed.

Efforts to Improve Access Continue at Other Sites
The reconstruction of the Hudson River Boat Launch at Lake Luzerne was completed. The facility has been modernized and the construction appears to be top quality. The Department can take pride in this facility.

The reconstruction of the Chazy Lake Boat Launch was completed by late autumn. The reconstruction of the Chateaugay Lake Boat Launch was scheduled to began in September 2001, and is nearly completed as of this writing.

An inspection was done of the Fourth and Seventh Lakes launches in the Town of Inlet, Hamilton County. These sites both had serious problems which were addressed during the low water in fall and early winter 2001-2002. In short, a new concrete

ramp was installed at Fourth Lake and a re-cycled steel mat ramp was installed at Seventh Lake.

Region 6

Public Access - Closing papers were signed completing the acquisition of Golden's Marina in the Town of Lyme. Jefferson County. This 13 acre property offers important lake access to the public and a safe harbor area on Lake Ontario.

Completed the acquisition of 0.43 equivalent miles of Public Fishing Rights on Skinner Creek in the town of Ellisburg, Jefferson County. Skinner Creek is a Lake Ontario tributary and supports fishing for wild steelhead and chinook salmon, as well as resident brown trout. The agreement also includes a 600+ foot long footpath from an existing developed fisherman parking area to provide access to the stream.

A FWMA Cooperative Agreement was signed with a landowner on Jacobs Creek. Nearly one mile of this popular Jefferson County trout stream will now be opened to the angling public.
Additional access sites were developed on the recently acquired Sucker Lake and North Sandy Creek. Phase 2 of the modernization of the Godfrey Point Boat Launch site on Oneida Lake was also completed. The parking area was expanded to 56C/T capacity with one handicapped spot and six cars including two handicapped places. The entire parking area and entrance road was paved and paint striped and also incorporated a "made-ready/tie-down" area for staging on the approach loop to the launch ramp. The existing toilet building was removed and replaced with an enclosed Port-a-John facility that is handicapped accessible.

Region 7

NYS DOT Environmental Initiative Projects:
Oneida Lake at Bartell Road and Swamp Road- Working in conjunction with the I-81 bridge resurfacing project, there were two separate handicap accessible sites constructed. The first, in Onondaga County, at Bartell Road, utilized an existing Park and Ride parking lot. This lot is spaced for 39 vehicles, including three spaces reserved for handicap parking. There is a paved wheel chair accessible trail leading from the parking area to the south shore of Oneida Lake. DOT installed a 100 ft. pedestrian bridge to access an island for shoreline fishing opportunities.

The second site is located on the north shore of Oneida Lake in Oswego County and is accessible from Swamp Road. This site has a new, paved parking area for 16 vehicles, including two spaces reserved for handicap parking. A paved wheel chair accessible trail leads to the shoreline and on to a treated wood surfaced fishing pier.

Appalachin Bridge Fisherman Access Site- In conjunction with a new bridge over the Susquehanna River near the hamlet of Appalachin in Toga County, DOT constructed a Fisherman Access Site. This site includes a gravel surfaced parking area that will accommodate 15 car/trailer units, and a concrete launch ramp.

Salmon River- In conjunction with the new NY. Rte. 3 bridge over the Salmon River in Oswego County, the DOT constructed a Fisherman Access Site. This site has parking for nine vehicles, including one space reserved for handicap parking. A handicap accessible trail goes from the paved parking area to a fishing platform. There is also non-handicap accessible shoreline fishing.

All of the above sites include landscaping with shrubs.

Otselic River- In cooperation with DOT, DEC Operations crews constructed an eight car Fisherman Access Site on DOT property, on the Otselic River, Cortland County, Town of Taylor. This site has a gravel surfaced access driveway and parking area.

Public Fishing Rights:
Ninemile Creek, Onondaga County- Through an agreement with Save The County, 1.798 eq.mi. of Public Fishing Rights was purchased. The purchase included a 261 ft. Footpath easement. Also, from another individual, a small Fisherman Parking Area was purchased, fee title, which includes approximately 90 ft. of stream frontage.

Region 8

Public Fishing Rights
Fishing Rights (2.891 eq. mile) were acquired on Cayuta Creek, Schuyler and Chemung Counties and on Johnson Creek, Orleans County. A 2.49 acre Fisherman Parking Area was also acquired on Oak Orchard Creek in Orleans County. Agreements were signed on another 2.991 eq. miles of Public Fishing Rights on Cayuta Creek and the Cohocton River, Steuben County.

Chemung River Trail Partnership
Three new boat launches were developed on the Chemung River trail bringing the total developed sites to six. The 3 new sites are Bottcher's Landing in Big Flats (T), Dunn Field in Elmira and Toll Bridge Park in Ashland (T). Work was also started at a fourth site at the Route 427 crossover in Chemung (T). Two new sites at Grove Street in Elmira and Conhocton Street in Corning are slated to be developed in 2002/03.

Seneca Lake (Severne Point) FAS
Stewardship funding from the Environmental Protection Fund was awarded for Phase 2 development of the Seneca Lake FAS. Parking was expanded from 25 cars/trailers to 43 cars/trailers. Development is now complete at this popular site.

Region 9

Stream Access
Approximately ½ mile of PFR was secured on California Hollow Creek, an excellent trout stream in Allegany County. This stream is stocked with trout annually and experiences heavy angler effort.

Fish Culture

Fish Culture Section

SPDES Permit Modifications

Discharge permits for all 12 of DEC's fish hatcheries were modified in 2001 to provide a consistent set of permit conditions for therapeutic chemical treatments used to control fish diseases or parasites. In cooperation with Division of Water staff, an updated reporting format was developed and implemented so that compliance with limits protective of aquatic fauna (ambient guidance values) could be demonstrated clearly for all treatments and reported on each Discharge Monitoring Report submitted by an individual hatchery. Additional system wide permit modifications standardized the deadlines for submission of Discharge Monitoring Reports to more closely correspond with the time required to receive results of laboratory analyses, and to standardize methods of quantifying the dilution factor of receiving waters.

As part of this overall process, Kathleen Wrotniak, Fish Culturist I at Salmon River Fish Hatchery, developed a Therapeutic Chemical Usage Form and a computer program that allows hatchery personnel to easily model treatment concentrations and dilution flows before actual treatments are conducted. This program provides a valuable tool that quickly shows how much hatchery flow can be treated while maintaining compliance with ambient guidance values.

USFWS Cold Water Fish Culture Course Hosted by DEC

In January 2002, the Cold Water Fish Culture course, coordinated by the USFWS National Conservation Training Center was presented in Syracuse, NY at the request of DEC staff. Because of the favorable location, 20 staff persons from DEC's fish hatcheries were able to attend. Course topics included fish nutrition, fish health management, fish physiology, fish hatchery management, broodstock genetics and culture of various life stages of cold water fish. This course provided valuable information on the most current technology used in cold water fish culture, and provided the opportunity for nearly 30% of DEC's hatchery staff to upgrade their knowledge and skills.

New Fish Stocking Trucks

Thirteen new, large fish stocking trucks were ordered via state contract, with arrival scheduled for May 2002. The cost of the trucks was $642,000, with funding provided by General Fund Capital Appropriations earmarked for Fish Hatchery Equipment. This purchase will allow replacement of all 1983-84 vintage stocking trucks. Stocking tanks, life support systems, and electronic monitoring capability will be installed on the trucks later in 2002 and the trucks will be available for spring stocking in 2003. The NYSDEC fish hatchery system stocks approximately 1 million pounds of fish from 12 fish hatcheries. Hatchery vehicles travel over 400,000 miles annually in fulfilling rearing and stocking program activities.

Adirondack Fish Hatchery

Large-scale feeding of landlocked salmon an ultra-low-phosphorus diet containing phytase to reduce phosphorus discharges at the Adirondack Fish Hatchery (2001).

This study represents a culmination of several pilot tests to develop a diet to markedly reduce the amount of excess dietary phosphorus that is not retained by fish. An ultra-low phosphorus (0.645% P) diet was fed to fingerling landlocked salmon *(Salmo salar)* at the NYS-DEC Adirondack Fish Hatchery at Saranac Lake, New York. The diet contained 10% fish meal, 5% fish hydrolysate, and increased levels of plant proteins and other low-phosphorus ingredients shown to be effective in rearing healthy salmon. Growth, bone ash, survival, feed conversion, and the amounts of waste phosphorus generated in effluents were determined. Modification of fish feed formulas represents one component of the Best Management Practices Plan for reducing phosphorus discharges in the Adirondack Hatchery effluent.

Fingerling landlocked salmon (initial mean weight, 17.4 g/fish) were acclimated in eleven circular tanks (26,050 fish/tank) and fed a standard feed before the test. The test diet was fed for 31 days starting September 14 until October 15, 2001.

The amounts of daily feed fed were calculated to supply 2.0% of body weight daily at the beginning of the experiment and decreased to 1.25% by the end. Mean body weights for fish in each tank were determined at the beginning of each experiment and every 2 weeks thereafter. The amount of waste phosphorus discharged was determined by calculation from the amount of phosphorus fed during the study less the amount retained in fish. The amount of dietary phosphorus fed to fish was determined (for each lot of fish) from analyses of P in feed fed. The amount of phosphorus retained in fish was determined by analyses of P in carcasses at the beginning (0.39%) and the end (0.38%) of the period. The amount of dietary phosphorus discharged as wastes was determined by the difference between the amount of phosphorus fed and the amount retained in the carcass during the study. At the end of the study, staff from the NYS-DEC Fish Health Laboratory in Rome, NY conducted a standard fish health assessment on the fish.

After 31 days of feeding, results showed that the experimental ultra-low-phosphorus (0.645%) diet containing phytase supported typical or normal growth, feed efficiency, survival, bone development and health in fingerling landlocked salmon, while generating the lowest amount of waste phosphorus discharged in water yet achieved at the hatchery. Salmon fed this diet discharged only 28.8% of the phosphorus consumed. That equated to 1.53 or 1.86 grams of phosphorus per kilogram of weight gain or feed fed.

Staff from the NYS-DEC Fish Health Laboratory in Rome (NY) examined 20 fish from the beginning and at end of the test. Diet had no apparent impact on condition factor, hematocrit, leucocrit or plasma protein. There were no observable impacts of feed on the eyes, gills, pseudobranchs, thymus, mesentery fat, spleen, hindgut, kidney, liver, or bile; therefore the fish were apparently in good health.

This large-scale hatchery test showed that an ultra-low-phosphorus (0.645%) diet containing phytase supported normal or excellent growth, feed efficiency, survival, bone development and health in fingerling Atlantic salmon while accomplishing the greatest retention of dietary phosphorus observed at the hatchery. Therefore, the amounts of wasted phosphorus were the lowest yet observed**.**

Bath Fish Hatchery

In 2000-2001 the Bath Hatchery produced 82,000 pounds of trout. This included domestic browns and rainbows, wild Finger Lakes strain rainbows and lakers, and Finger Lakes hybrid rainbows. The wild rainbow eggs were obtained from adults collected at the Cayuga Inlet fish ladder by Region 7 fisheries personnel. The hybrids were created using Cayuga Inlet females and domestic Randolph Hatchery males.

The lake trout egg take was one of the shortest in recent memory. It lasted five days from 10/9 to 10/13/00. Two crews were utilized, one each at Cayuga and Seneca. A total of 147 females were stripped from both lakes. 507,000 eggs were collected.

The heated pole barn shop was completed by the hatchery crew. The electric service line and meter to the residence were replaced. A propane-fired steam boiler furnace was purchased for the residence. It will be installed this coming summer.Upcoming R&I projects include repairing the garage foundation, installing a new service entrance in the residence, and installing an underground electric feeder line to the garage.

Van Hornesville Hatchery

During fiscal year 2001-2002 the Van Hornesville Fish Hatchery produced 33,290 lbs. of domestic rainbow trout using 37,360 lbs of food for a conversion of 1.12. Starting with 315,000 eggs acquired from the Randolph Hatchery in October/November of 1999 the staff at Van Hornesville produced an end result of 250,000 fish that were either transferred to other NYS facilities or stocked. No major losses were experienced due to diseases or human error. The Van Hornesville facility retains an A-1 disease classification and during the past year there was no therapeutic treatment utilized on the fis

Van Hornesville stocked over 165,000 yearling fish, 41,000 lbs., of 5 different coldwater species; brown, brook, rainbow and lake trout and Atlantic salmon. Another 9,400 two year old brown trout, 10,859 lbs., were also stocked. All species stocked other than rainbow trout were obtained from other hatcheries. 8,838,000 fry/fish, 3153 lbs. of three cool water species; walleye pike, muskellunge and tiger muskellunge, were stocked.

Physical projects under construction during the past year include: building a pond cover to exclude avian predators, a new moveable visitor information kiosk has been put into use. and a 15 ft. extension was added to the 30 ft. truck barn to allow winter storage of the new larger stocking truck. A local company, Empire Fiberglass, applied a prototype lining to a deteriorated hatchery raceway to help extend its usefulness.

On March 26, 2002 the Van Hornesville Area experienced a severe ice storm. Power was off for 46 hours. Nearly 100 of the Red Pine trees that border the hatchery were blown down or snapped off. No injuries to personnel, or loss of fish were experienced, but a mess was left which took a crew from Operations Unit several weeks to clean-up.

Two off- site presentations were given to area schools and a trout egg incubation and hatching program was provided for the Owen D. Young 4th grade classroom. A total of 200 eggs were incubated in the classroom, resulting in 100 fingerlings from the program. The kids enjoyed watching mother nature do her thing!

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Annual Report of Fish Species Production by Hatchery
April 1, 2001 - March 31, 2002

	Fry		1" - 4 1/4"		4 1/2" - 5 3/4"		6" - 6 3/4"		7" - 7 3/4"		8" plus		Total	
Species	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**
Brook Trout														
Adirondack			95,049	2,366	23,230	883					14,840	4,795	133,119	8,044
Bath											3,810	1,268	3,810	1,268
Caledonia							400	44					400	44
Catskill											6,790	2,377	6,790	2,377
Chateaugay			35,470	850	7,700	339	2,200	255			37,040	10,526	82,410	11,970
Randolph											12,265	4,497	12,265	4,497
Rome			13,073	163	177,760	6,481					35,270	12,024	226,103	18,668
Salmon River					2,000	63					7,700	1,925	9,700	1,988
Van Hornesville			600	16							2,080	548	2,680	564
Total			**144,192**	**3,395**	**210,690**	**7,766**	**2,600**	**299**			**119,795**	**37,960**	**477,277**	**49,420**
Brown Trout														
Adirondack							650	63			61,170	16,777	61,820	16,840
Bath			95,000	1,874	28,250	1,788			2,600	477	159,810	52,218	285,660	56,357
Caledonia							700	82	21,900	4,018	271,290	105,911	293,890	110,011
Catskill											404,410	144,523	404,410	144,523
Chateaugay					800	57	300	31			126,630	33,209	127,730	33,297
Randolph			160,000	2,566	14,750	1,003	5,200	433			154,200	48,904	334,150	52,906
Rome					31,400	2,133	2,400	226	1,200	164	324,400	90,971	359,400	93,494
Salmon River					134,420	4,201			7,820	1,372	190,490	37,948	332,730	43,521
Van Hornesville					2,800	179					145,290	40,822	148,090	41,001
Total			**255,000**	**4,440**	**212,420**	**9,361**	**9,250**	**835**	**33,520**	**6,031**	**1,837,690**	**571,283**	**2,347,880**	**591,950**
Rainbow Trout														
Adirondack					12,000	706					28,160	8,210	40,160	8,916
Bath			53,000	571			44,000	4,696	28,000	4,445	20,115	6,019	145,115	15,731
Caledonia											67,950	17,844	67,950	17,844
Catskill							2,000	165			44,340	12,538	46,340	12,703
Chateaugay					56,500	4,122	69,000	6128			84,960	25,801	210,460	36,051
Randolph									2,000	292	39,380	14,015	41,380	14,307
Rome											51,330	12,603	51,330	12,603
Salmon River											7,880	1,926	7,880	1,926
Van Hornesville							3,270	314			27,190	8,780	30,460	9,094
Total			**53,000**	**571**	**68,500**	**4,828**	**118,270**	**11,303**	**30,000**	**4,737**	**371,305**	**107,736**	**641,075**	**129,175**

Annual Report of Fish Species Production by Hatchery
April 1, 2001 - March 31, 2002

	Fry		1" - 4 1/4"		4 1/2" - 5 3/4"		6" - 6 3/4"		7" - 7 3/4"		8" plus		Total	
Species	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**
Rt-steelhead														
Chateaugay					20,000	662							20,000	662
Salmon River					563,800	22,482	195,000	14,871					758,800	37,353
Total					**583,800**	**23,144**	**195,000**	**14,871**					**778,800**	**38,015**
Lake Trout														
Adirondack							29,250	2,024	450	36			29,700	2,060
Bath							121,200	6,774			89,500	15,411	210,700	22,185
Caledonia							111,500	7,892	240,000	20,086			351,500	27,978
Catskill							11,100	793					11,100	793
Chateaugay							6,850	496	39,600	3,288			46,450	3,784
Rome							8,350	618	4,150	323			12,500	941
Salmon River							36,000	2,666	112,000	8,746			148,000	11,412
Van Hornesville											5,000	1,000	5,000	1,000
Total							**324,250**	**21,263**	**396,200**	**32,479**	**94,500**	**16,411**	**814,950**	**70,153**
Splake														
Adirondack									3,540	578			3,540	578
Chateaugay									300	49	5,600	1,902	5,900	1,951
Rome									3,500	588	5,200	1,090	8,700	1,678
Total									**7,340**	**1,215**	**10,800**	**2,992**	**18,140**	**4,207**
Landlocked Salmon														
Adirondack			594,500	572	81,000	2,594			193,380	22877	500	3,605	869,380	29,648
Bath									52,000	6,011			52,000	6,011
Catskill									3,000	349			3,000	349
Chateaugay							41,220	4,087	37,930	4,734			79,150	8,821
Rome									1,950	227			1950	227
Salmon River							49,600	3,900					49,600	3,900
Van Hornesville									4,200	525			4,200	525
Total			**594,500**	**572**	**81,000**	**2,594**	**90,820**	**7,987**	**292,460**	**34,723**	**500**	**3,605**	**1,059,280**	**49,481**
Coho														
Salmon River					155,000	6,145			101,000	11,663			256,000	17,808
Total					**155,000**	**6,145**			**101,000**	**11,663**			**256,000**	**17,808**

Annual Report of Fish Species Production by Hatchery
April 1, 2001 - March 31, 2002

	Fry		1" - 4 1/4"		4 1/2" - 5 3/4"		6" - 6 3/4"		7" - 7 3/4"		8" plus		Total	
Species	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**
Chinook														
Caledonia			126,610	1,096									126,610	1,096
Salmon River			1,502,800	16,286									1,502,800	16,286
Total			**1,629,410**	**17,382**									**1,629,410**	**17,382**
Kokanee														
Adirondack			160,000	706									160,000	706
Catskill			4,800	23									4,800	23
Rome			21,820	122									21,820	122
Van Hornesville			15,200	39									15,200	39
Total			**201,820**	**890**									**201,820**	**890**
Total Number Trout & Salmon			**2,877,922**	**27,250**	**1,311,410**	**53,838**	**740,190**	**56,558**	**860,520**	**90,848**	**2,434,590**	**739,987**	**8,224,632**	**968,481**
Walleye														
Adirondack					32,930	1,220							32,930	1,220
Bath	9,970,000	133											9,970,000	133
Caledonia			36,340	63									36,340	63
Catskill			10,000	21	9,000	391							19,000	412
Chateaugay	2,284,000	30	10,000	27	9,100	297							2,303,100	354
Chautauqua			235,500	187									235,500	187
Oneida	169,753,000	2,261			103,000	4,478							169,856,000	6,739
Randolph			5,500	11	5,500	204							11,000	215
Rome	5,200,000	69	6,120	13									5,206,120	82
Salmon River	6,650,000	89	16,500	27	16,500	611							6,683,000	727
Van Hornesville	8,678,000	116	14,500	30	3,600	133							8,696,100	279
Total	**202,535,000**	**2,698**	**334,460**	**379**	**179,630**	**7,334**							**203,049,090**	**10,411**
Muskellunge														
Bath											5,800	446	5,800	446
Chautauqua	362,000	13	198,000	24	12,700	146					21,900	1,931	594,600	2,114
Total	**362,000**	**13**	**198,000**	**24**	**12,700**	**146**					**27,700**	**2,377**	**600,400**	**2,560**
Tiger Muskellunge														
Bath											12,030	1,835	12,030	1,835
Caledonia											9,500	1,384	9,500	1,384
Catskill											9,450	1,383	9,450	1,383
Chateaugay											1,900	271	1,900	271

Annual Report of Fish Species Production by Hatchery
April 1, 2001 - March 31, 2002

	Fry		1" - 4 1/4"		4 1/2" - 5 3/4"		6" - 6 3/4"		7" - 7 3/4"		8" plus		Total	
Species	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**
Tiger Muskellunge (cont.)														
Randolph											1,500	214	1,500	214
Rome											21,950	3,098	21,950	3,098
Salmon River											10,440	1,358	10,440	1,358
So. Otselic											3,000	461	3,000	461
Van Hornesville											20,150	2,868	20,150	2,868
Total											**89,920**	**12,872**	**89,920**	**12,872**
Paddle Fish														
Randolph	1,878	498											1,878	498
Total	**1,878**	**498**											**1,878**	**498**
Panfish														
Chautauqua											3,000	600	3,000	600
Total											**3,000**	**600**	**3,000**	**600**
Total Number Warmwater Fish	**202,898,878**	**3,209**	**532,460**	**403**	**192,330**	**7,480**					**120,620**	**15,849**	**203,744,288**	**26,941**

Hatchery Fish Production Annual Summary by Species
April 1, 2001 - March 31, 2002

	Fry		1"- 4 1/4"		4 1/2" - 5 3/4"		6" - 6 3/4"		7" - 7 3/4		8" plus		Total	
Species	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**	**Number**	**Weight**
Cold Water														
Brook Trout			144,192	3,395	210,690	7,766	2,600	299			119,795	37,960	477,277	49,420
Brown Trout			255,000	4,440	212,420	9,361	9,250	835	33,520	6,031	1,837,690	571,283	2,347,880	591,950
Rainbow Trout			53,000	571	68,500	4,828	118,270	11,303	30,000	4,737	371,305	107,736	641,075	129,175
Rt-steelhead					583,800	23,144	195,000	14,871					778,800	38,015
Lake Trout							324,250	21,263	396,200	32,479	94,500	16,411	814,950	70,153
Splake									7,340	1,215	10,800	2,992	18,140	4,207
Landlocked Salmon			594,500	572	81,000	2,594	90,820	7,987	292,460	34,723	500	3,605	1,059,280	49,481
Coho					155,000	6,145			101,000	11,663			256,000	17,808
Chinook			1,629,410	17,382									1,629,410	17,382
Kokanee			201,820	890									201,820	890
Total Number Trout & Salmon			**2,877,922**	**27,250**	**1,311,410**	**53,838**	**740,190**	**56,558**	**860,520**	**90,848**	**2,434,590**	**739,987**	**8,224,632**	**968,481**
Warm Water														
Walleye	202,535,000	2,698	334,460	379	179,630	7,334							203,049,090	10,411
Muskellunge	362,000	13	198,000	24	12,700	146					27,700	2,377	600,400	2,560
Tiger Muskellunge											89,920	12,872	89,920	12,872
Paddle Fish	1,878	498											1,878	498
Pan Fish											3,000	600	3,000	600
Total Nuimber Warmwater Fish	**202,898,878**	**3,209**	**532,460**	**403**	**192,330**	**7,480**					**120,620**	**15,849**	**203,744,288**	**26,941**
Grand Total of Trout & Warmwater Fish	**202,898,878**	**3,209**	**3,410,382**	**27,653**	**1,503,740**	**61,318**	**740,190**	**56,558**	**860,520**	**90,848**	**2,555,210**	**755,836**	**211,968,920**	**995,422**

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Endangered, Threatened, and Special Concern Species

Region 1

Otis Pike Pond Reclamation
The Regional Fisheries Unit coordinated the reclamation of a small pond on the Otis Pike Preserve. This pond is a authenticated breeding pond for the tiger salamander (*Ambystoma tigrinum*), a New York State endangered species. The Region 1 Natural Resources Unit was advised on September 18, 2000 that mosquitofish (*Gambusia sp.*) and golden shiner (*Notemigonus crysoleucas*) had become established in the pond. Mosquitofish are known to be predators on amphibians and the inability of tiger salamanders to spawn successfully in waters with established fish populations is well documented. To allow the tiger salamanders to breed in this pond in 2001, The Regional Fisheries Unit coordinated with the Wildlife Unit, Habitat Unit, Pesticides Unit and Environmental Permits to secure emergency authorization to have the pond treated with rotenone in October, when the tiger salamanders were not in the pond.

Licensed Pesticide Applicators were contacted and the lowest bid was submitted by L.I.F.E. Inc. of Stormville NY. The treatment was completed on October 19 under the supervision of the Regional Fisheries and Pesticides Units. A follow up inspection on the morning of October 20 revealed a good kill of golden shiner, mosquitofish and brown bullhead (*Ameiurus nebulosus*). Unfortunately a follow up inspection the following week revealed that there were still mosquitofish and brown bullhead alive in the pond. Arrangements were made for a second treatment of the pond, but a cold snap the day before the planned second treatment dropped the water temperature too low for the treatment to be effective. Consequently, reclamation efforts were abandoned and plans were initiated to complete reclamation of the pond in the summer of 2001.

Region 9

Paddlefish Restoration
2001 was the fourth consecutive year that paddlefish were released into Kinzua Reservoir (1998 - 46, 1999 - 535, 2000 - 135, 2001 - 1,878). The paddlefish measured 6.4 inches (eye to fork of tail) and appeared to be in good condition when released. A coded wire tag was inserted into the paddle of all paddlefish before release. As of March, 2002 nine reports of paddlefish either stranded or caught angling have been received. Stocking and tag recovery information was forwarded to MICRA.

Statewide

Recovery activities for Endangered/Threatened fish species
Restoration efforts for paddlefish, round whitefish and lake sturgeon resulted in stocking of 4,400 whitefish (spring fingerlings to three Adirondack waters) and 1,900 paddlefish (four times the usual allotment to Allegheny Res.). Lake sturgeon eggs suffered complete mortality after two weeks of development. The round whitefish recovery plan was updated with the cooperative efforts of Regions 5 and 6. Progress toward lake sturgeon restoration, 1995-2001 was summarized in a manuscript to be in the proceedings of a July 2001 conference in Wisconsin.

Surveys conducted at 163 sites provided catches and updates on several rare species including bluebreast darter, mountain brook lamprey, bigeye chub and eastern sand darter. Apparent declines by the swallowtail shiner in the north central part of Susquehanna basin were studied in association with their apparent replacement by mimic shiners (new to the basin). Summary reports are available on fishes in the upper Niagara R., Allegheny basin and in northern rivers extending from the Poultney to the Black Rivers. Extensive editorial review was offered to a series of reports, which were part of an effort classifying 21 fish species as AAt Risk@ for the Northeast US.

Urban and Suburban Fisheries

Region 1

Training to Park Police

Fisheries staff assisted Division of Law Enforcement staff in conducting ECL enforcement training for New York State Parks Police and for Suffolk County Parks Police. The purpose of the training was to familiarize parks police with portions of the ECL that they are likely to have opportunity to enforce in the course of their usual duties. Fisheries staff gave a 45 minute presentation on the identification of freshwater fish species common to Long Island and the angling regulations pertaining to these species. The presentation also included a brief overview of the responsibilities of the Bureau of Fisheries and a case study of a fisheries management problem. The case study was included to give the officers a basic understanding of why fishing regulations are imposed, how they are developed, and how their biological impact is evaluated by biologists. A total of four training sessions were given, two for Suffolk County Park Police and two for New York State Park Police.

Central Office - Inland Section

I FISH NY

Substantial progress was made in the planning of the Division of Fish, Wildlife and Marine Resources's new **I FISH NY** outreach initiative. A steering committee comprised of Division staff from Regions 1,2,3 and Central Office, as well as representatives from the Division of Public Affairs and Education and Law Enforcement was organized and met on a monthly basis to develop a strategy for implementing the initiative. The program was kicked off at a Press Conference at the 2002 New York National Boat Show, where Commissioner Crotty officially announced the initiative. In addition to the completion of the strategic plan, initial plans for year 1 of I FISH NY, include the development of promotional and informational materials, as well as the gathering of baseline information on the knowledge of residents of the focus area on fishing and aquatic resources which will be used to measure the future success of the program.

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Administration

Region 1

Database Management
During fiscal year 2000/2001, the Regional Fisheries Unit made a big push to update the fisheries database and catch up on the backlog of surveys that were outstanding. One hundred fifty four surveys were sent up to the Biosurvey Unit representing new surveys and old style Data Verification Reports (DVR) dating back to 1992. Many of DVRs were of surveys that had been lost from the database at some time and had to be re-entered into the database. Of the 154 surveys sent up, 58 were returned to the Regional Fisheries Unit by March 31, 2001. Fifteen of those surveys had their DVRs reviewed and were sent back to the Biosurvey Unit for processing. Twenty-two surveys were returned to the Region as finalized.

Region 3

Triploid Grass Carp Stocking Permits
Region 3 issued a total of 293 permits (149 reissues) to stock triploid grass carp (TGC) in 2001. From 1991 through 2000 a total of 2,646 TGC permits have been issued in the Region. About one third of these were reissued permits for waters that already had permits to stock these fish in previous years. Also during this period, 96 of these permit applications required additional review following the SEQRA process given that the ponds were over 5 acres in size or had permanently flowing outlets. We estimate that over 1,900 different water bodies in Region 3 have received permits to stock TGC since 1991.

Region 4

Presentation Given
Staff attended the "Managing River Flows for Biodiversity" conference at Colorado State University and gave a presentation on the Beaver Kill Willowemoc watershed study. Co-presenters included Jock Conyingham of Trout Unlimited, Wayne Reynolds, Commissioner of the Delaware County Department of Public Works, Joel Robinson of the NYS Department of Transportation, and Piotr Parasiewicz of Cornell University. The conference, dealing with man's impact on and use of riverine ecosystems, was attended by more than 300 people representing many states as well as Canada, Mexico, and Australia.

FMIS Team Participation
Staff participated with the Department's Financial Management Information System Team, one of the Goal 1 "Action Teams." This team is charged with assessing fiscal processes in the agency and to recommend improvements in these systems. During this past year the team has gathered requirements from both Central Office Units as well as selected Regions, summarized and prioritized these requirements, and developed a "Request for Proposal" which was then sent to selected vendors having appropriate software. Two vendors presented product demonstrations to the team in October and their submissions are currently being studied with an eye toward making a vendor selection in early 2002. The modern accounting system selected will ultimately replace the fragmented accounting and project tracking systems now in use.

Hoosic River Chemical Spill
On June 28, 2001 a chemical spill by the Oak Mitsui Corporation, entered the Hoosic River (Rensselaer Co.) and significantly impacted aquatic life for approximately seven miles from Hoosic Falls to Buskirk. The Fisheries Unit conducted extensive surveys of the impacted reach and developed estimates of the extent of the kill. The estimates run into millions. These data have been continually refined as the case proceeds. It is expected that Unit involvement will continue for at least the next year.

Water Quality and Stream Protection Violations
Region 4 Habitat and Fisheries Unit Biologists typically review in excess of 300 projects involving activities in and around streams and other protected water bodies within the nine-county area comprising Region 4. In addition, there are a number of violations which must be documented and referred during any given year. The retirement of a critical Habitat Biologist has seriously impacted the Fisheries Unit as well as the remaining Habitat person. Until that position is filled, several of our traditional fish management activities will have to be curtailed. Examples of recent violations include stream bank disturbances on Cherry Valley Creek

(Otsego County), construction-related disturbances on Spring Brook (Delaware County), stream bank and bridge construction disturbances on Catskill Creek (Albany County), improper culvert placement on Honest Brook (Delaware County), improper construction activities on Indian Creek (Columbia County), Article 17 water quality violations in Delaware County from logging activities and illegal pond construction in a course of a stream.

Habitat staff is assisting in the development of Stream Corridor Management Plans on the West Branch of the Delaware River (above Cannonsville Reservoir), and on the Stony Clove and Broadstreet Hollow which flow from Greene into Ulster County. County Soil and Water Conservation Districts are the lead agencies working in cooperation with landowners, businesses, conservation groups, the NYC DEP, as well as DEC staff. All plans will be based on the principles of fluvial geomorphology and each stream will have one or more demonstration projects constructed to address unstable, eroding stream segments.

Habitat and Fisheries staff are working with NYC DEP, County Soil and Water Conservation Districts, and the USGS to select and/or develop a methodology to evaluate in-stream fish habitat. The procedures developed will be used in streams throughout the NYC watershed area.

Region 5

Larry Strait Leaves State Service
Fisheries Manager Larry Strait left state service April 2001 to pursue other interests. A strong dedication to Adirondack brook trout and Lake Champlain landlocked salmon management marked his career.

Burt Morehouse Retires
Principal Fish & Wildlife Technician Burt Morehouse retired effective May 24, 2001, after 37 years with the Bureau of Fisheries. He will be missed, as will his knowledge and expertise.

Region 7

Database Management
The backlog of surveys has been eliminated. A total of 115 surveys were sent into the Biosurvey Unit during the past year and a total of 225 DVR's were received, reviewed and returned for final update into the Statewide Data Base.

Unit Management Planning
Staff supplied fisheries resource data and management information for three Division of Lands and Forests Unit Management Plans (UMP): Rogers Center UMP - Chenango County, Tioga UMP - Tioga County, and Five Streams UMP, Chenango County.

Permits and Licenses
The following number of permits and licenses were issued by the Fisheries Unit:
Bait Licenses - 75; Farm Fish Pond Licenses - 194; Triploid Crass Carp Permits - 216; Permits to stock or remove fish - 25; Piranha Permits - 6.

Region 8

Triploid Grass Carp Permits
The number of triploid grass carp permits for FY 2001 increased from the previous two years and approached the all time high in 1998. The Region issued 404 permits in FY 2002 compared to 337 in FY 2000, 372 in FY 1999 and 410 in FY 1998. Most were for individually owned ponds less than one acre in surface area. No permit fee is charged and the administration involved with this relatively new program is substantial.

Farm Fish Pond Licenses
The Region issued 195 farm pond licenses in FY 2001. Again, there is no fee for this five year license.

Bait Licenses
With the elimination of sporting license sales in the Region, the Fisheries Key Board Specialist adopted an additional duty of issuing bait licenses. She issued 91 bait licenses and handled $1,039 in license fees.

Region 9

Triploid Grass Carp Permits
The number of grass carp permits issued this year was almost 500, which has held true for three years. It would seem that this may be the threshold for grass carp permits.

Inland Fisheries

Regulatory Endevors
Inland staff continued to fine-tune proposed NYCRR amendments to provide for the sale of hatchery reared black bass in New York fish markets and resturants. Proposals originally submitted in 1995 were updated and then revised to accomodate suggestions from legal office and law enforcement staff. The latest proposal was forwarded for legal and executive office approval on March 11, 2002. Inland staff also contributed substantially to the review and finalization of the numerous sport fishing regulation change proposals submitted by Regional units for the October 2002 license year. During this fiscal year, Central Office staff coordinated review of 78 Scientific Collector License Applications.

Federal Aid Coordination
The Section prepared applications for the Bureau's Research and Management Grant (F-48-R) and its Aquatic Education Grant (F-50-E). Staff also compiled performance reports for these grants which encompass 15 studies and 62 jobs. The Bureau's grant guidelines handbook was updated and Section Heads within central office assumed responsibility for administrative as well programmatic oversight of studies under their respective section.

Progress on the Statewide Fisheries Survey Database
Substantial progress was made in restructuring the Fisheries Database into an efficient set of ACCESS tables along with updated and improved field forms and data entry screens. Biosurvey Unit staff continued to process and enter data from backlogged, “found” and new (2001) surveys into the database. As of March 31, 2002 some 500 surveys had been entered and verified to the database.

Statewide Fish Stocking Policies Book
The computerized “Stocking Policies Book” was converted to an interactive, more user friendly ACCESS database. The new structure allows for more direct and efficient interaction with Regional offices and fish culture units on annual adjustments and preparation of annual stocking target numbers. It also provides for easy reference to stocking policies for individual waters and quick summaries of policies by locations and species. The new stocking book database provides a number of convenient searches and reports that allows the rapid retrieval of summary information from the 2366 records currently contained in the database. During 2001-2002, 178 policies were modified, 87 were deleted and 66 were added to the book. Production plans for 2002 for all sizes and strains included: 1,923,749 brown trout, 1,600,000 chinook salmon, 245,000 coho salmon, 327,700 kokanee, 726,330 landlocked salmon, 1,132,300 lake trout, 409,935 muskellunge, 464,789 rainbow trout, 815,700 steelhead, 81,040 splake, 473,824 brook trout, 85,010 tiger muskellunge and 182,428,800 walleye. As with any new program, some gliches were uncovered, but for the most part the new electronic book worked extremely well and was well received by the Regions during its trial run.

Division Work Plan
The Inland Fisheries Section provided a significant amount of staff time in support the Division’s computerized work plan. Activities included reprogramming portions of the user interface, database management, extracting T&A code reports from the Department’s T&A system, and serving on the Division’s program plan workgroup.

Sport Fishing Regulation Changes
Initiated the biennial changes to sport fishing regulations. Approximately 130 changes to regulations were proposed to become effective October 1, 2002. Among the significant changes proposed were the following:

- Reduction of the daily creel limit for walleye on Lake Erie has from 5 to 4 fish per day.
- Changed in the daily creel limit for trout been to 5 fish of any size including not more than 2 longer than 12" for Broome, Chemung, Chenango, Cortland, Genesee, Livingston, Madison, Monroe, Onondaga, Ontario, Orleans, Oswego, Schuyler, Seneca, Steuben, Tioga, Tompkins, Wayne and Yates Counties. An additional five brook trout under 8 inches may be included in the daily creel limit in counties where these regulations have previously been in effect.
- Increase in the minimum size limit for muskellunge in Lake Erie, the Upper and Lower Niagara River, Lake Ontario, and the St. Lawrence River.
- Reduction of the daily creel limit for trout and salmon in the lower Niagara River to 3 fish per day in any combination.

- Reduction of the daily creel limit for yellow perch and sunfish in St. Lawrence County from "any number" to 50 of each per day.

Proposed changes to regulations were posted on the DEC web site and the public was afforded opportunity to comment. This proved to be a popular format for dissemination of information on proposed changes to sport fishing regulations.

Angler Achievement Awards Program

A total of 182 entries to the New York State Angler Achievement Awards program were received during calendar year 2001; Two New York State Records, 51 Annual Awards and 129 Catch and Release Awards. The dominance of catch and release awards is a continuing trend. Notably, a single entry for an Annual Award was received for each of four popular game fish; landlocked salmon, largemouth bass, muskellunge and tiger muskellunge. Twenty-one Catch and Release Awards were issued for largemouth bass, 8 for muskellunge and 5 for tiger muskellunge. Smallmouth bass continued to dominate the Catch and Release Award category with 43 awards issued.

Two New York State Records were advanced during 2001; a 5 lb. 14 oz. brook trout from Clear Pond, Franklin County and a 3 lb. 13 oz.

Bureau of Fisheries
2001-2002 Staffing

CENTRAL OFFICE

Administration

Stang, Douglas	Biologist 4 (Aquatic)
Pell, Clark	Biologist 2 (Wildlife)
Brandt, Robert	Biologist 2 (Aquatic)
Stegemann, Eileen	Sr. Engineering Research Editor
Smollin, Mary	Secretary 1

Great Lakes Fisheries

Lange, Robert	Biologist 3 (Aquatic)

Public Use and Extension

Gann, Michael	Biologist 3 (Aquatic)

Inland Fisheries

Festa, Patrick	Biologist 3 (Aquatic)
Woltmann, Ed	Biologist 2 (Aquatic)
Daley, James	Biologist 2 (Aquatic) - started 8/16
Hurst, Steve	Biologist 1 (Aquatic)
Linda Richmond	Program Aid
James Andersen	Clerk I
Tanashelia McGill	Clerk 1 (Seasonal)

Fish Culture Section

Hulbert, Philip	Fish Culturist VI
Buell, Henry	Fish Culturist V
Sarrge, Beverly	Secretary 1

REGION 1

Guthrie, Charles	Biologist 2 (Aquatic)
Kozlowski, Gregory	Biologist 1 (Aquatic)
Henson, Fred	Biologist 1 (Aquatic)
Hughes, Tom	F&W Tech 2
Papa, Lauren	Laborer (Seasonal)

REGION 2

Van Maaren, Chris	Biologist 1 (Aquatic)

REGION 3

Elliot, Wayne	Biologist 2 (Aquatic)
Pierce, Ron	Biologist 1 (Aquatic)
Angyal, Bob	Biologist 1 (Aquatic)
Surprenant, Leslie	Biologist 1 (Aquatic)
Flaherty, Mike	Biologist 1 (Aquatic)
VanPut, Ed	Fish and Wildlife Technician 3
Falk, Art	Fish and Wildlife Technician 3
Wysocki, Linda	Fish and Wildlife Technician 2
McNamara, Tim	Fish and Wildlife Technician 1 (Seasonal)
Moore, Denise	Fish and Wildlife Technician 1 (Seasonal)
Motluck, Lisa KC	Fish and Wildlife Technician 1 (Seasonal)

REGION 4

Slingerland, Donald	Biologist 2 (Aquatic)
McBride, Norm	Biologist 1 (Aquatic)
Zielinski, Dan	Biologist 1 (Aquatic)
Sicluna, Joe	Biologist 1 (Aquatic)
Cornwell, Dave	Fish and Wildlife Technician 2
Linhart, Fred	Fish and Wildlife Technician 3
Martel, Al	Fish and Wildlife Technician 3
Collins, Kandy	Keyboard Specialist 2
Ryan, Bruce	Fish and Wildlife Technician 1 (Seasonal)
Strassenburg, Jeff	Fish and Wildlife Technician 1 (Seasonal)
Krutz, John	Fish and Wildlife Technician 1 (Seasonal)
Kenney, Jim	Laborer/ FWMA Patrolman (Seasonal)

REGION 5

Nashett, Lawrence	Biologist 2 (Aquatic)
Miller, William	Biologist 1 (Aquatic)
Durfey, Lance	Biologist 1 (Aquatic)
Preall, Richard	Biologist 1 (Aquatic)
Schoch, William	Biologist 1 (Aquatic)
Demong, Leo	Biologist 1 (Aquatic)
Brown, Raymond	Fish and Wildlife Technician 3
Sausville, Jennifer	Fish and Wildlife Technician 2
Shanahan, Thomas	Fish and Wildlife Technician 1
Beatty, Jeannine	Secretary 1
Nettles, David	Fishery Biologist (USFWS)
Morehouse, Burton	Fish and Wildlife Technician 3
Saltsman, Leslie	Fish and Wildlife Technician 3
Inglee, Jeffrey	Laborer (Seasonal)
Stephenson, Bethany	Fish and Wildlife Technician 1 (Seasonal)
Fellion, Melissa	Fish and Wildlife Technician 1 (Seasonal)
Duensing, Sara	Fish and Wildlife Technician 1 Seasonal)

REGION 6

McCullough, Russ	Biologist 1 (Aquatic)
Gordon, William	Biologist 1 (Aquatic)
Flack, Frank	Biologist 1 (Aquatic)
Carlson, Douglas	Biologist 1 (Aquatic)
Hasse, Jack	Biologist 1 (Aquatic)

Klindt, Roger	Biologist 1 (Aquatic)
Adams, Richard	Fish and Wildlife Technician 3
Town, Blanche	Fish and Wildlife Technician 2
Colesante, Mark	Fish and Wildlife Technician 1 (Seasonal)
Gordon, David	Fish and Wildlife Technician 1 (Seasonal)
Hart, Jessica	Fish and Wildlife Technician 1 (Seasonal)
Covey, Julia	Fish and Wildlife Technician 1 (Seasonal)
Edmonds, Brian	Fish and Wildlife Technician 1 (Seasonal)
Farmer, Richard	Laborer (Seasonal)
Gordon, Aaron	Laborer (Seasonal)
Helmetsie, Robert	Laborer (Seasonal)
Hopkins, Lucas	Laborer (Seasonal)

REGION 7

Les Wedge	Biologist 2 (Aquatic)
Dan Bishop	Biologist 1 (Aquatic)
Tom Chiotti	Biologist 1 (Aquatic)
Dave Lemon	Biologist 1 (Aquatic)
Jeff Robins	Biologist 1 (Aquatic)
Russ Davall	F&W Technician 3
Jeff Eller	F&W Technician 2
Paul Moore	F&W Technician 2
Bob Rathman	F&W Technician 2
Janet Hines	Secretary 1
Shawn Fox	Seas. F&W Technician
Peter Moles	Seas. F&W Technician
Jim Ryan	Seas. F&W Technician

REGION 8

Abraham, Bill	Biologist 2 (Aquatic)
Kosowski, David	Biologist 1 (Aquatic)
Pearsall, Web	Biologist 1 (Aquatic)
Sanderson, Matt	Biologist 1 (Aquatic)
Hammers, Brad	Biologist 1 (Aquatic)
Angold, Fred	Fish and Wildlife Technician 3
Olsowsky, David	Fish and Wildlife Technician 2
Verna, Marvin	Fish and Wildlife Technician 2
Richardson, Denise	Fish and Wildlife Technician 2
Burdett, Anna	Keyboard Specialist 1
Deres, Bob	Fish and Wildlife Technician 1 (Seasonal)
Engman, Angel	Fish and Wildlife Technician 1 (Seasonal)
Barge, Sarah	Fish and Wildlife Technician 1 (Seasonal)
DeLong, Martin	Fish and Wildlife Technician 1 (Seasonal)
Mulhall, Daniel	Fish and Wildlife Technician 1 (Seasonal)
Krutz, John	Fish and Wildlife Technician 1 (Seasonal)
Miller, Steve	Fish and Wildlife Technician 1 (Seasonal)

REGION 9

Mooradian, Steve	Biologist 2 (Aquatic)
McKeown, Paul	Biologist 1 (Aquatic)
Evans, Joe	Biologist 1 (Aquatic)
Wilkinson, Mike	Biologist 1 (Aquatic)
Cornett, Scott	Biologist 1 (Aquatic)
Rende, Emilio	Fish and Wildlife Technician 2
Spinelli, Jim	Fish and Wildlife Technician 1 (Seasonal)
Preston, Ron	Fish and Wildlife Technician 1 (Seasonal)
Telecky, Jason	Fish and Wildlife Technician 1 (Seasonal)
Adams, Connie	Fish and Wildlife Technician 1 (Seasonal)

LAKE ERIE UNIT

Culligan, William	Biologist 2
Einhouse, Donald	Biologist 1
Markham, James	Biologist 1
Zeller, Douglas	Fisheries Research Vessel Captain
Zimar, Richard	Fish and Wildlife Technician 2
Beckwith, Brian	Fish and Wildlife Technician 2
Szwejbka, MariEllen	Secretary 1
McCarthy, Patrick	Fish and Wildlife Technician (Seasonal)
Smith, Brandon	Fish and Wildlife Technician (Seasonal)
Sek, Daniel	Fish and Wildlife Technician (Seasonal)

LAKE ONTARIO UNIT

LaPan, Steven	Biologist 2 (Aquatic)
Eckert, Thomas	Biologist 1 (Aquatic)
Lantry, Brian	Biologist 1 (Aquatic) - resigned 11/2001
Muise, Eric	Fisheries Research Vessel Captain - deceased 12/31/2001
Massia, Gaylor	Maintenance Assistant
Grant, Beverly	Secretary 1
Holland, Douglas	Fish and Wildlife Technician 1 (Seasonal)
Holland, Derek	Fish and Wildlife Technician 1 (Seasonal)
Turner, Kristen	Fish and Wildlife Technician 1 (Seasonal)
Bennett, Todd	Fish and Wildlife Technician 1 (Seasonal)
Edmonds, Brian	Fish and Wildlife Technician 1

	(Seasonal)
Gordon, David	Fish and Wildlife Technician 1 (Seasonal)
Hart, Jessica	Fish and Wildlife Technician 1 (Seasonal)
Covey, Julie	Laborer (Seasonal)
Hinckley, M. Ellen	Laborer (Seasonal)
Black, Kate	Green Thumb Staff
Haller, Ralph	Green Thumb Staff

ADIRONDACK HATCHERY

Grant, Edward	Fish Culturist 2
Miller, Douglas	Fish Culturist 1
Wallace, Michael	Fish and Wildlife Technician 1
Aldinger, Fritz	Fish and Wildlife Technician 1
Klubek, Kenneth	Fish and Wildlife Technician 1

BATH HATCHERY

Osika, Kenneth	Fish Culturist 2
Sweet, Robert	Fish Culturist 1
Klesa, Rodney	Fish and Wildlife Technician 1
Raab, Kelly	Fish and Wildlife Technician 1
Schirmer, Jason	Fish and Wildlife Technician 1

CALEDONIA HATCHERY

Mack, Alan	Fish Culturist 3
Stein, Robert	Fish Culturist 1
Zenzen, Stephen	Fish and Wildlife Technician 1
Kelley, Charles	Fish Culturist 1
Hubbard, Bruce	Fish Culturist 1
Krause, Mark	Fish Culturist 2
Hayden, Kevin	Fish and Wildlife Technician 1
Ward, Brian	Fish and Wildlife Technician 1

CATSKILL HATCHERY

Covert, Scott	Fish Culturist 3
Anstey, Timothy A.	Fish and Wildlife Technician 1
Judson, James L	Fish and Wildlife Technician 1
Anderson, John	Fish Culturist 2
Gennarino, Joseph	Fish and Wildlife Technician 1

CHATEAUGAY HATCHERY

Brue, Peter	Fish Culturist 2
Armstrong, David	Fish Culturist 1
Griffin, Joseph	Fish and Wildlife Technician 1
Jackson, Matthew	Fish and Wildlife Technician 1
Ventiquattro, Thomas	Fish Culturist 1

CHAUTAUQUA HATCHERY

King, Larry	Fish Culturist 2
DeFries, Eric	Fish Culturist 1
Rambuski, James	Fish and Wildlife Technician 1
Gruber, Bradley	Fish and Wildlife Technician 1

ONEIDA HATCHERY

Babenzien, Mark	Fish Culturist 3
Colesante, Richard	Biologist 1 (Aquatic)
Rathje, Carl	Fish Culturist 2
Evans, Bill	Fish Culturist 1
Dixon, Michael	Fish Culturist 1

RANDOLPH HATCHERY

Mellon, Jon	Fish Culturist 2
Kriger, Richard L.	Fish Culturist 1
Hohmann, Barry	Fish and Wildlife Technician 1
Baginski, Kenneth	Fish and Wildlife Technician 1
Borner, Richard	Fish Culturist 1
Hulings, Raymond	Maintenance Assistant

ROME HATCHERY

Lewthwaite, Robert	Fish Culturist 3
Woodworth, William	Fish Culturist 1
Wanner, Scott	Fish Culturist 1
Talbot, Clifford	Fish Culturist 2
Smith, Robert	Laborer - retired 8/2001
Benn, Eugene	Fish and Wildlife Technician 1
Matt, Kimberly	Keyboard Specialist.
Batur, Mark	Fish and Wildlife Technician 1
Erway, David	Fish and Wildlife Technician 1
Goulette, Gerard	Fish and Wildlife Technician 1
Grabowski, Steven	Fish and Wildlife Technician 1
Nessel, Robert	Maintenance Supervisor

FISH DISEASE CONTROL CENTER

Schachte, Dr. John	Pathologist 2 (Aquatic)
Petrie, Christopher	Fish and Wildlife Technician 2
Jalbert/Kohler	Keyboard Specialist

SALMON RIVER HATCHERY

Dolan, Stephen	Fish Culturist 2
Greulich, Andreas	Fish Culturist 3
Wrotniak, Kathleen	Fish Culturist 1
Domachowske,David	Fish and Wildlife Technician 1
Gosier, Corbin	Fish and Wildlife Technician 1
Hurd, Karen	Keyboard Specialist
Everard, James .	Fish and Wildlife Technician 1
LaShomb, Ronald	Fish Culturist I
Nelson, Robert	Fish and Wildlife Technician 1

SOUTH OTSELIC HATCHERY

Emerson, Pat	Fish Culturist 2
Kielbasinski, Thomas	Fish Culturist 1
Domachowske, David	Fish and Wildlife Technician 1
Schara, William	Fish and Wildlife Technician 1

VAN HORNESVILLE HATCHERY

Kroon, Larry	Fish Culturist 2
DuBois, Craig	Fish Culturist 1
Everard, James F	Fish and Wildlife Technician 1